IR CORNER

ROOTED IN DATA
Its Past, Present, & Future Use at TCC

Who Persisted?
Using an equity index to compare progression during the pandemic

Springing Forward
An exploration of factors that may have helped Spring 2022 enrollment surpass Fall 2021

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After reaching the two-year mark since the beginning of the pandemic, many are now reflecting on what may be immutable shifts in culture and mind-set. Among these changes may be a deeper appreciation for how data and research can guide conversations and support evidence-based decision-making. Those who might have had little interest in numbers may have suddenly become enthralled with Covid case-tracking dashboards, reading research articles, or listening to research findings being discussed in the news. While some probably reached information overload from the deluge of Covid stats, an understanding of the value of data and research perhaps remains, and the audience for research findings may now extend much further than the walls of academia.

TCC's data journey has likely similarly been accelerated. In the past two years, we've seen more requests for "real-time" data such as registration patterns and more requests for data to help answer very specific questions such as how policy/procedure updates affect course scheduling.

In this issue, we present some important findings regarding enrollment at TCC. First, we investigate who persisted during the pandemic using an equity index, and then we examine the potential impact that policy/procedure changes may have had on increasing Spring 2022 enrollment. In addition, we track students to determine how many students were within 15 hours of degree completion but "stopped-out" of higher ed during the pandemic. We also research whether first time in college students were likely to change programs and the academic preparedness of incoming students based on their end of course high school exams.

The IR team is excited to support the growing interest and need for data and will strive to share important findings in *IR Corner* because we have no doubt that TCC is now firmly rooted in data.

inspIRe

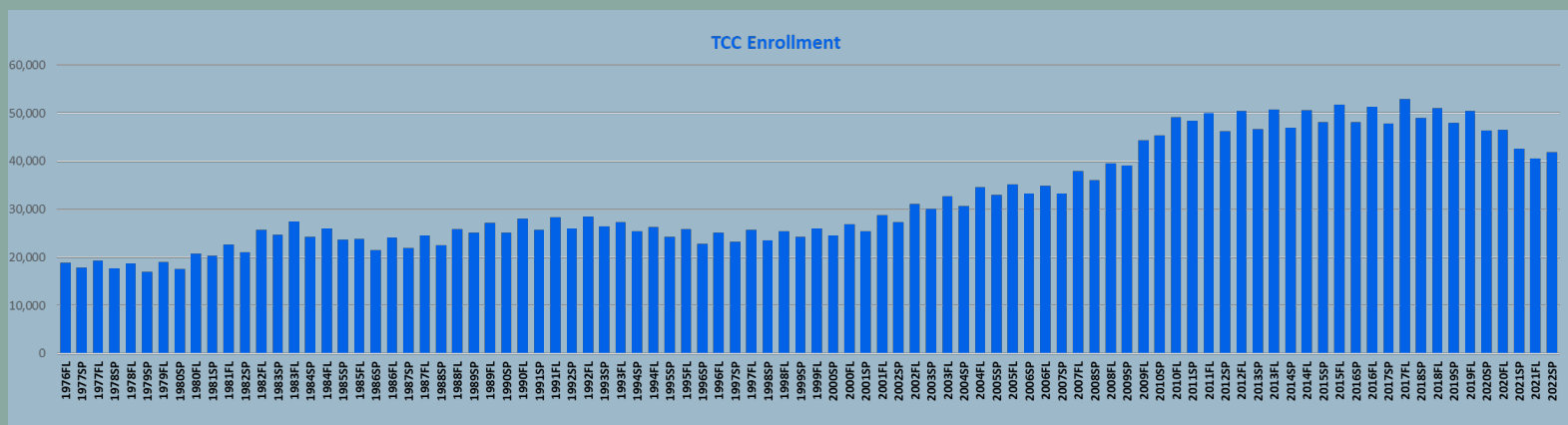*"If the statistics are boring, you've got the wrong numbers."**

*Attributed to Edward Tufte

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The Story Continues ...

TCC Enrollment

Fall 2019 50,496

Spring 2020 46,326

Fall 2020 46,561

Spring 2021 42,649

Fall 2021 40,562

Spring 2022 41,829

*Lost in the Pandemic

*Who Persisted?

*Springing Forward

8% decrease from Fall 2019 to Fall 2020, a decrease in line with state & national trends

13% decrease from Fall 2020 to Fall 2021, the largest decrease in TCC history

3% increase from Fall 2021 to Spring 2022, only the second time ever that spring enrollment was higher than the prior fall

*Read a series of articles in IR Corner to following the enrollment story

WHO PERSISTED?

USING AN EQUITY INDEX TO COMPARE PROGRESSION DURING THE PANDEMIC

By: Elizabeth Northern

The COVID-19 pandemic radically changed our world, and the higher education arena was not spared in the least. In 2020FL, community colleges across the United States collectively experienced a 9.5% drop in headcount with one of the highest declines seen in Male Hispanic/Latino community college students (16.6% decline).[1]

However, some groups of students persisted through the pandemic better than other groups. Since declines were witnessed across nearly all demographic groups, an equity index comparing the persistence of each respective demographic in relation to their size helps illuminate which groups persevered better, despite the trying times.[1]
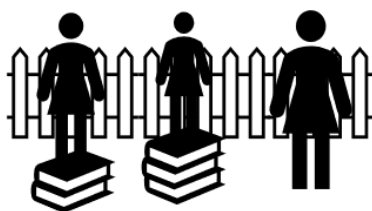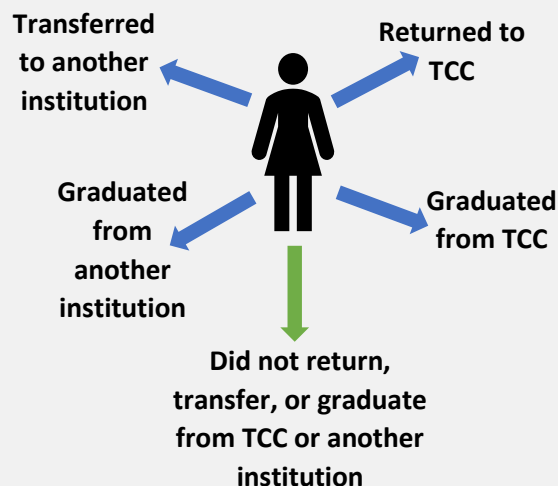
How is the progression rate measured?

Rather than considering retention to or graduation from TCC as the only metrics for persistence, including transferring to or graduating from another institution into the calculation provides a broader picture as to where and how a student progresses from one fall term to the next. This analysis examines all credit students at TCC in 2019FL and 2020FL and where these students were the subsequent fall semesters – through retention, transfer, or graduation.

Progression is defined as:

1. Returning to TCC the subsequent fall semester,
2. Graduating from TCC within the year,
3. Transferring to another institution the subsequent fall semester, and/or
4. Graduating from another institution within the year.

For example: a student was enrolled at TCC in 2019FL, before the pandemic. In 2020FL when most courses shifted to online, she chose to enroll at UNT for coursework. Thus, she progressed.

Transferred to another institution

Returned to TCC

Graduated from another institution

Graduated from TCC

Did not return, transfer, or graduate from TCC or another institution

What is an Equity Index?

When comparing a metric like progression amongst groups, equity can be determined by considering the proportionality of each group within the larger population. Parity (perfect equity) is achieved when the proportion of the target group progressing out of all students progressing is equal to the proportion of the target group within the total population - an equity index value of one. An equity index value less than one indicates a smaller proportion of the target group progressed than would occur if progression was equivalent across groups. An equity index value greater than one indicates a larger proportion of the target group progressed than would occur if progression was equivalent across groups.

Equity Index:

$$\frac{(\text{Target group progressing} \div \text{Total students progressing})}{(\text{Target group total} \div \text{Total students})}$$

For example: In 2019FL, there were 50,519 credit students enrolled at TCC on Census Day. Of these students, 7,493 were First Time in College (FTIC) students. In 2020FL, 33,782 students had progressed either at TCC or another institution, of which 4,417 were FTIC students.

The FTIC student group had an equity index value of .88, as this group did not progress as expected per the original FTIC population when compared to the overall population.

$$\frac{\dfrac{4{,}417 \text{ FTIC Progressed}}{33{,}782 \text{ Total Students Progressed}}}{\dfrac{7{,}493 \text{ Total FTIC}}{50{,}519 \text{ Total Students}}}$$

.1308

.1483

→ .88
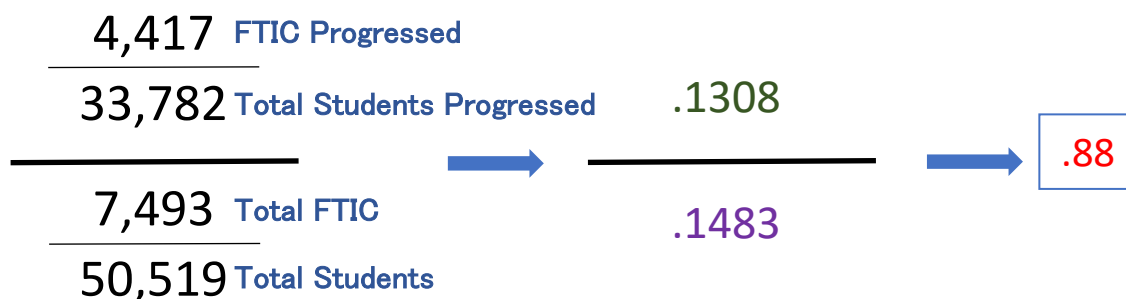
While the FTIC group represented **14.8%** of the total population, the FTIC group who progressed only represented **13.1%** of the population who progressed, which is **88%** of the FTIC's proportion of representation in the total population.

Combining the Progression Rate and Equity Index (E.I.)

When looking at both the 2019FL and 2020FL groups of students, a few demographic groups consistently performed higher than parity (in blue) on the equity index for the progression metric, compared to red which represents scoring below parity.

Full-Time Students: despite experiencing about a 9% drop in headcount from 2019FL to 2020FL, full-time students had about a 73% progression rate both terms. (E.I. = 1.09 and 1.11)

Female Students: female students experienced about a 5% decrease increase in headcount from 2019FL to 2020FL. (E.I. = 1.04 and 1.02)

TSI Met Students: like full-time students, TSI Met students also had about a 9% drop in headcount from 2019FL to 2020FL. (E.I. = 1.05 and 1.04)

Students with 31+ Hours: all three cumulative hour groupings, for both 2019FL and 2020FL, had over 3 percentage point higher progression rates than the total population. (E.I. = 1.05-1.14 and 1.05-1.14)

Students Under the Age of 18: included in this population are the Early Collegiate High School/Dual Credit populations which did not experience a decline in growth during the pandemic.[2] (E.I. = 1.16 and 1.08)

Students of "Other" Ethnicities*: this group of students increased in headcount about 7% from 2019FL to 2020FL. (E.I. = 1.06 and 1.03)

Demographic		2019FL (E.I.)	2020FL (E.I.)
Full-Time or Part-Time	Full-Time	1.09	1.11
	Part-Time	0.97	0.96
FTIC	FTIC	0.88	0.92
Gender	Female	1.04	1.02
	Male	0.95	0.98
TSI Status	TSI Not Met	0.92	0.93
	TSI Met	1.05	1.04
First Generation	Not First Gen	1.03	1.02
	Unknown First Gen	0.97	0.99
	First Gen	0.98	0.99
Cumulative Hours Earned by End of Term	0 Hours	0.35	0.45
	1-9 Hours	0.91	0.89
	10-18 Hours	0.99	0.99
	19-30 Hours	0.96	0.95
	31-45 Hours	1.05	1.05
	46-59 Hours	1.12	1.12
	60+ Hours	1.14	1.14
Age Range	Under 18	1.16	1.08
	18 to 24	0.98	1.00
	25 and Over	0.93	0.94
Veteran Status	Not a Veteran	1.00	1.00
	Veteran	0.92	0.96
	Dependent	1.02	1.00
Ethnicity	Black / African American	0.94	0.96
	Hispanic Latino	0.99	0.99
	Other *	1.06	1.03
	White	1.02	1.01

Other included American/Alaska Native, Asian, Hawaiian/Pacific Islander, Nonresident Alien, Race and ethnicity unknown, and Two or more races

A student was considered first generation if both mother and father did not have any college experience.
Cumulative hours included developmental education hours.

What to Make of the Data

When looking at the results of the equity index analysis on the progression metric, a few themes emerged:

Academic Preparedness

Students who were full-time, TSI Met, or further along in their academic journeys (more cumulative hours earned) scored above one on the equity index and have higher progression rates than their counterparts. These three demographic variables may all be connected.

- Students with more credit hours are likely TSI Met.
- Full-time students may likely earn more hours faster than part-time students.
- For 2019FL and 2020FL, a higher percentage of full-time students were TSI Met.

Gender

Female students historically outperform male students in most key performance indicator metrics.[3]

- Although TCC male students experienced a collective ~23% drop in enrollment from 2019FL to 2021FL (compared to ~18% for female students), male student progression increased almost one percentage point during the time period, compared to female student progression decreasing almost three percentage points.

Dual Credit and ECHS

Students under the age of 18 did not experience as sharp of a decline in enrollment across community colleges in the United States.[4] The regulations surrounding secondary education and individual independent school districts may be related to these students' higher progression rates.

- From 2019FL to 2020FL, public 2-year institutions across the United States experienced less than one percent drop in enrollment for students under 18. And from 2020FL to 2021FL, these institutions grew 1.5% for the same age group – surpassing the total enrollment headcount of students under 18 from 2019FL.[4]

Spring 2022 Enrollment

The 2021FL degree-seeking FTIC cohort experienced 78.2% retention from 2021FL to 2022SP, which was 8.2 percentage points higher than the 2020FL cohort.[5]

- An increase in available online sections and a timing change for non-payment may be related to the increase in 2022SP enrollment. Read more about this in the next article, "Springing Forward."

Additional Research Ideas

The equity index humanizes the progression metric by gauging how far removed a group is from equity. Further research may determine how many students would be needed to bring each group to parity. Such insight may prove useful in guiding conversations surrounding the size and scope of resource needs and allocation.

[1] "Lost in the Pandemic" https://www.tccd.edu/documents/about/research/institutional-intelligence-and-research/iir-corner/2021-06-IR-corner.pdf

[2] "2021FL ECHS End of Term Report" https://www.tccd.edu/documents/about/research/institutional-intelligence-and-research/reports/dual-credit-echs/2021FL-echs-end-of-term-report.pdf

[3] Success by Gender and Ethnicity Dashboard, https://www.tccd.edu/about/research/institutional-intelligence-and-research/dashboards/

[4] National Student Clearinghouse Fall 2021 Current Term Enrollment Estimates, https://nscresearchcenter.org/current-term-enrollment-estimates/

[5] Mid-Year Update: Degree-Seeking First Time in College Students, https://www.tccd.edu/documents/about/research/institutional-intelligence-and-research/reports/key-performance-indicators/kpi-FLSP-retention-degree-seeking-ftic.pdf

Sources: ODR, Enrollment Data by Term, National Student Clearinghouse data, Student Degrees (excludes MSA, OSA, and FOS)

Progression from Fall to Fall

Term	Demographic		Total Headcount	At TCC				At Another Institution				Total Progressed	
				Retained Next FL		Graduated Within Year		Retained Next FL		Graduated Within Year			
				N	% Total	N	% Total	N	% Total	N	% Total	N	% Total
2019FL		Total	50,519	23,187	45.9%	5,862	11.6%	8,655	17.1%	406	0.8%	33,782	66.9%
	Full-Time or Part-Time	Full-Time	13,560	6,985	51.5%	2,122	15.6%	2,489	18.4%	16	0.1%	9,899	73.0%
		Part-Time	36,959	16,202	43.8%	3,740	10.1%	6,166	16.7%	390	1.1%	23,883	64.6%
	FTIC	FTIC	7,493	4,094	54.6%	33	0.4%	351	4.7%	2	0.0%	4,417	58.9%
	Gender	Female	29,649	14,103	47.6%	3,667	12.4%	5,356	18.1%	261	0.9%	20,575	69.4%
		Male	20,870	9,084	43.5%	2,195	10.5%	3,299	15.8%	145	0.7%	13,207	63.3%
	TSI Status	TSI Not Met	17,934	9,090	50.7%	472	2.6%	1,786	10.0%	10	0.1%	10,993	61.3%
		TSI Met	32,585	14,097	43.3%	5,390	16.5%	6,869	21.1%	396	1.2%	22,789	69.9%
	First Generation	Not First Gen	20,916	9,328	44.6%	2,635	12.6%	4,322	20.7%	219	1.0%	14,464	69.2%
		Unknown First Gen	18,763	8,899	47.4%	1,631	8.7%	2,760	14.7%	102	0.5%	12,199	65.0%
		First Gen	10,840	4,960	45.8%	1,596	14.7%	1,573	14.5%	85	0.8%	7,119	65.7%
	Cumulative Hours Earned by End of Term	0 Hours	1,684	269	16.0%	8	0.5%	120	7.1%	17	1.0%	392	23.3%
		1-9 Hours	10,573	5,366	50.8%	8	0.1%	1,080	10.2%	45	0.4%	6,430	60.8%
		10-18 Hours	8,003	4,351	54.4%	35	0.4%	969	12.1%	23	0.3%	5,308	66.3%
		19-30 Hours	6,908	3,723	53.9%	73	1.1%	719	10.4%	21	0.3%	4,446	64.4%
		31-45 Hours	7,597	4,106	54.0%	437	5.8%	1,248	16.4%	26	0.3%	5,315	70.0%
		46-59 Hours	5,577	2,259	40.5%	1,538	27.6%	1,514	27.1%	28	0.5%	4,164	74.7%
		60+ Hours	10,177	3,113	30.6%	3,763	37.0%	3,005	29.5%	246	2.4%	7,727	75.9%
	Age Range	Under 18	9,615	5,128	53.3%	446	4.6%	2,286	23.8%	0	0.0%	7,440	77.4%
		18 to 24	26,527	12,238	46.1%	2,845	10.7%	4,410	16.6%	214	0.8%	17,385	65.5%
		25 and Over	14,377	5,821	40.5%	2,571	17.9%	1,959	13.6%	192	1.3%	8,957	62.3%
	Veteran Status	Not a Veteran	46,713	21,629	46.3%	5,280	11.3%	7,931	17.0%	380	0.8%	31,292	67.0%
		Veteran	1,673	593	35.4%	315	18.8%	313	18.7%	15	0.9%	1,032	61.7%
		Dependent	2,133	965	45.2%	267	12.5%	411	19.3%	11	0.5%	1,458	68.4%
	Ethnicity	Black / African American	8,564	3,714	43.4%	958	11.2%	1,327	15.5%	75	0.9%	5,381	62.8%
		Hispanic Latino	18,467	8,990	48.7%	2,090	11.3%	2,562	13.9%	99	0.5%	12,203	66.1%
		Other *	6,459	3,075	47.6%	724	11.2%	1,312	20.3%	58	0.9%	4,580	70.9%
		White	17,029	7,408	43.5%	2,090	12.3%	3,454	20.3%	174	1.0%	11,618	68.2%
2020FL		Total	46,558	19,672	42.3%	6,046	13.0%	8,520	18.3%	449	1.0%	30,542	65.6%
	Full-Time or Part-Time	Full-Time	12,368	5,950	48.1%	2,216	17.9%	2,466	19.9%	19	0.2%	8,978	72.6%
		Part-Time	34,190	13,722	40.1%	3,830	11.2%	6,054	17.7%	430	1.3%	21,564	63.1%
	FTIC	FTIC	5,444	2,896	53.2%	37	0.7%	384	7.1%	2	0.0%	3,272	60.1%
	Gender	Female	28,285	12,065	42.7%	3,864	13.7%	5,334	18.9%	305	1.1%	18,844	66.6%
		Male	18,273	7,607	41.6%	2,182	11.9%	3,186	17.4%	144	0.8%	11,698	64.0%
	TSI Status	TSI Not Met	16,840	8,050	47.8%	641	3.8%	2,018	12.0%	13	0.1%	10,244	60.8%
		TSI Met	29,718	11,622	39.1%	5,405	18.2%	6,502	21.9%	436	1.5%	20,298	68.3%
	First Generation	Not First Gen	20,173	8,184	40.6%	2,682	13.3%	4,229	21.0%	238	1.2%	13,435	66.6%
		Unknown First Gen	16,902	7,371	43.6%	1,911	11.3%	2,854	16.9%	110	0.7%	10,942	64.7%
		First Gen	9,483	4,117	43.4%	1,453	15.3%	1,437	15.2%	101	1.1%	6,165	65.0%
	Cumulative Hours Earned by End of Term	0 Hours	2,019	454	22.5%	9	0.4%	138	6.8%	11	0.5%	599	29.7%
		1-9 Hours	8,797	4,102	46.6%	8	0.1%	1,056	12.0%	32	0.4%	5,150	58.5%
		10-18 Hours	6,854	3,329	48.6%	39	0.6%	1,100	16.0%	33	0.5%	4,443	64.8%
		19-30 Hours	6,197	3,137	50.6%	58	0.9%	747	12.1%	25	0.4%	3,875	62.5%
		31-45 Hours	7,148	3,810	53.3%	440	6.2%	1,089	15.2%	19	0.3%	4,935	69.0%
		46-59 Hours	5,282	2,010	38.1%	1,557	29.5%	1,399	26.5%	36	0.7%	3,882	73.5%
		60+ Hours	10,261	2,830	27.6%	3,935	38.3%	2,991	29.1%	293	2.9%	7,658	74.6%
	Age Range	Under 18	9,507	4,551	47.9%	426	4.5%	2,119	22.3%	1	0.0%	6,746	71.0%
		18 to 24	23,332	10,018	42.9%	2,907	12.5%	4,370	18.7%	218	0.9%	15,362	65.8%
		25 and Over	13,719	5,103	37.2%	2,713	19.8%	2,031	14.8%	230	1.7%	8,434	61.5%
	Veteran Status	Not a Veteran	43,112	18,391	42.7%	5,447	12.6%	7,849	18.2%	394	0.9%	28,319	65.7%
		Veteran	1,459	508	34.8%	291	19.9%	264	18.1%	23	1.6%	920	63.1%
		Dependent	1,987	773	38.9%	308	15.5%	407	20.5%	32	1.6%	1,303	65.6%
	Ethnicity	Black / African American	7,911	3,243	41.0%	1,020	12.9%	1,402	17.7%	76	1.0%	5,004	63.3%
		Hispanic Latino	16,227	7,373	45.4%	2,075	12.8%	2,397	14.8%	124	0.8%	10,575	65.2%
		Other *	6,937	3,040	43.8%	836	12.1%	1,380	19.9%	73	1.1%	4,698	67.7%
		White	15,483	6,016	38.9%	2,115	13.7%	3,341	21.6%	176	1.1%	10,265	66.3%

A student could be included in multiple columns. For example, a 2019FL student who graduated from TCC in 2020SP and enrolled at UNT in 2020FL would be included in the "At TCC - Graduated Within Year" column and the "At Another Institution - Retained Next FL" column. The Total Progressed column is an unduplicated headcount of students who were retained to TCC or another institution or who graduated from TCC or another institution.

Springing Forward

An exploration of factors that may have helped Spring 2022 enrollment surpass Fall 2021.

For much of TCC's history, the ebb and flow of enrollment between fall and spring semesters has been consistent. Fall enrollment, when many students start their academic journey, has usually been larger than the subsequent Spring enrollment. Only twice since 1976 has the reverse been true – in 2009-2010, amid the Great Recession and the opening of Trinity River Campus, and in 2021-2022, two years after the COVID-19 pandemic began [Figure 1]. The first case took place during a rapid growth in enrollment across the country and is understood to be a result of the economic recession [1]. The recent second case occurred at a time when community college enrollment had declined both nationwide and within Texas [2]. Sure enough, Spring 2022 enrollment is down from pre-pandemic levels by about 10% (since 2020SP). But then, what might explain the increased enrollment between Fall 2021 and Spring 2022?

Increased Demand for Online Courses

One factor that contributed to Spring's higher enrollment was an increase in online enrollment. Both registrations for Fall 2021 and Spring 2022 took place while variants of COVID-19 were widely reported to be spreading – Delta and Omicron, respectively – which may have decreased demand for in-person classes and increased demand for online instruction at the time. Although online sections grew by about 16% from pre-pandemic 2019FL to 2021FL, they grew by about 26% from 2020SP to 2022SP. Notably, online sections grew by about a third between 2019-2020 and 2021-2022 (excluding summers). The result was a semester where TCC Connect reached its highest historical record (15,542, Spring 2022) [Figure 2].

Figure 2: Census Day Campus Headcounts
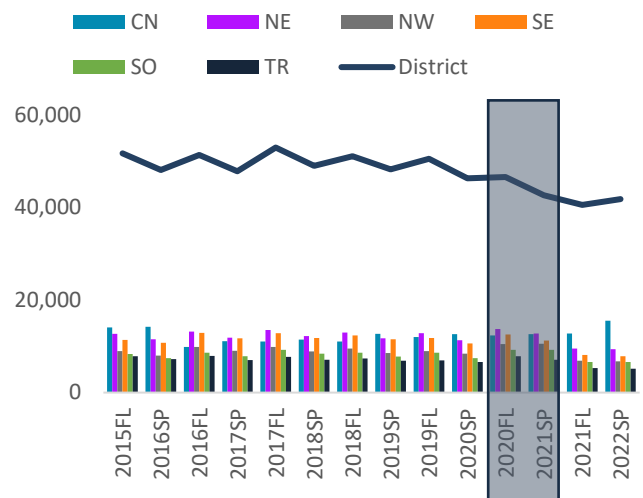
During the highlighted period (2020-2021), almost all courses were taught online, so campus designations did not have the same meaning. During 2015-2016, dual credit was at TCC Connect (CN), but was moved to the physical campuses by the following year, which is the reason for CN's early decline in headcount.

Figure 1: Census Day Headcount Change Fall to Spring
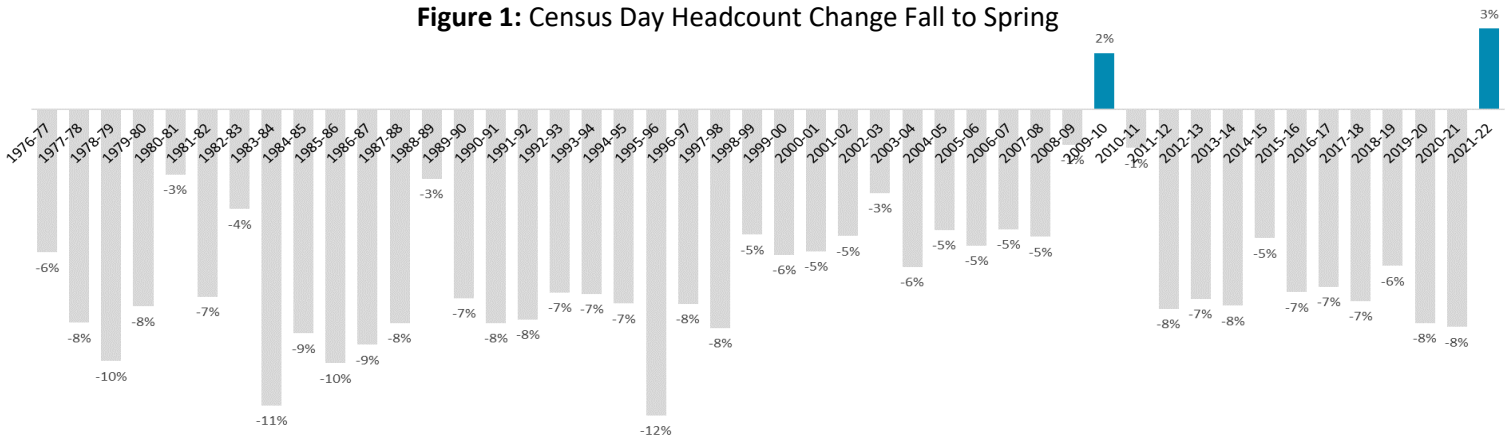
Drops for Non-Payment

The second factor that may have contributed to Spring's growth is the change in how registration for classes was handled before the term starts. In particular, the past procedure was to drop enrollments that had not been paid before the semester starts. Historically, the fall date to drop enrollments for non-payment began at midnight on the first Wednesday of August. For Spring, the date began at midnight on the first Wednesday of December. However, in Spring 2022, the first drop date was moved to the beginning of 16-week classes, the third Thursday of January. In Figure 3, the first date of drops for non-payment (circled in green) was notable as the largest day of dropped enrolls during registration.

Figure 3: Drops for Non-Payment During Registration
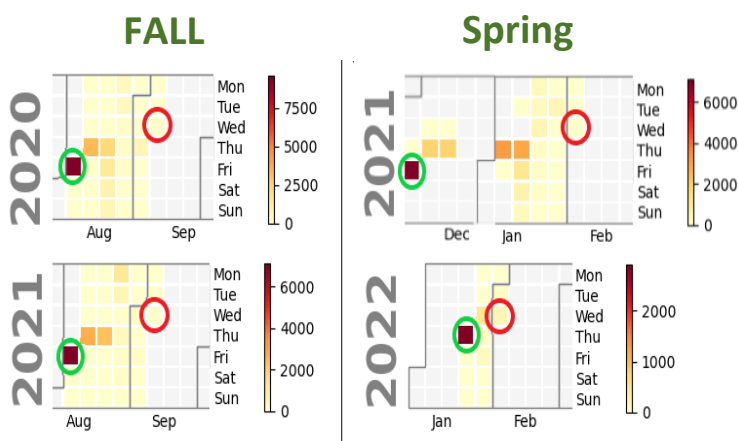
Circled in green are the first days in which unpaid enrollments were dropped. Circled in red are the term's census day. Note Spring 2022 did not start dropping unpaid enrollments until the first day of 16-week classes.

The goal of the change in Spring 2022 was to lower the barrier to entry by assisting and connecting students with advising and financial aid and by allowing more time for students to pay for their courses. The result was a drastic decline (about 58%) in students dropped for non-payment prior to census day who also never ended up re-enrolling by census day as compared to the previous Spring.

Figure 4: Number of Students Dropped
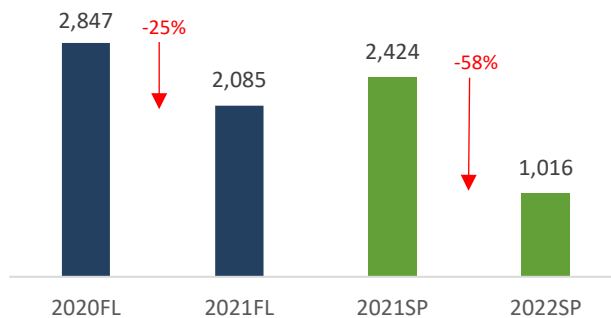
Fall drops for non-payment (bars shown in blue) declined by 25% while enrollment decreased. Spring drops for non-payment (bars shown in green) declined by 58% while enrollment increased.

Conclusion

Although community college enrollment has declined across the US – mainly caused by disruptions from the pandemic – there are still opportunities to grow enrollment or at least slow down the decline. By adapting and changing procedures to meet student needs such as providing more courses in the instructional method in line with students' preferences or assisting students in registering and paying for courses, TCC is better prepared to enroll and educate more students.

As online instruction grows and the student-focused registration process continues, TCC may once again see enrollment growth in future semesters. Tarrant County, after all, is expected to grow by about 370,000 residents in the next decade, of which about 305,000 will be above the age of 18 [3]. TCC's procedures and student-readiness may play a pivotal role in attracting the next generation of students.

Sources: Statistical Handbooks; ST Student Enrollment Section Details

[1] Schmidt, Erik. *Postsecondary Enrollment Before, During, and Since the Great Recession*. US Census Bureau, 2018.

[2] *Term Enrollment Estimates, Fall 2021*. National Student Clearinghouse Research Center, 2022.
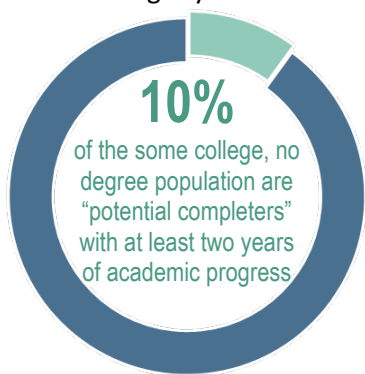
[3] https://demographics.texas.gov/data/tpepp/projections/

NEAR COMPELTION

How many TCC students stop within 15 hours of graduation?

Holly Stovall & Martin Salgado-Flores

In an article examining those with some college but no degree (*Some College, No Degree: A 2019 Snapshot for The Nation and 50 States[1]*), the National Student Clearinghouse (NSC) Research Center reported that approximately two million people in the US enter postsecondary education for the first time each year. One-third did not earn a credential and were no longer enrolled eight years later.

10% of the some college, no degree population are "potential completers" with at least two years of academic progress

Some College, No Degree Population: In the NSC database, about thirty-six million people held some post-secondary education but no completion and were not enrolled.

At the time of the report (2019), Texas had over 2 million people in the *some college, no degree* population, and about 11% were "potential completers". This sizable subpopulation of "potential completers" presents a huge

opportunity since research shows they are more likely to re-enroll and finish college compared to other former students. For those identified as part of Texas' *some college, no degree* population as of December 2013, 16% re-enrolled in four years (2014 to 2018), and of those who re-enrolled, 56% completed or were still enrolled.

Near Completers at TCC

TCC students who stopped during the pandemic were tracked to determine the group of potential TCC completers. TCC "near completers" were defined as students were enrolled at TCC in 2019 (fall/spring), who had declared an associate's program, who had 45 or more hours (excluding developmental education), who never earned an associate's degree at TCC, and who were not enrolled and had not graduated from any institution between January 1, 2020, and December 31, 2021.

There were about 1,300 TCC "near completers". These near completers had a median of 55 earned hours.

Age of Near Completers at TCC

The median age for near completers at the time of their enrollment in 2019 was 26 years old. About 43% were under 25, and about 34% were aged 25 to 34. Thus, a majority are in or near the age group (25 to 34) targeted in Texas' 60x30 higher education goal to increase the percent of Texans who earn a certificate or degree to 60% by 2030.
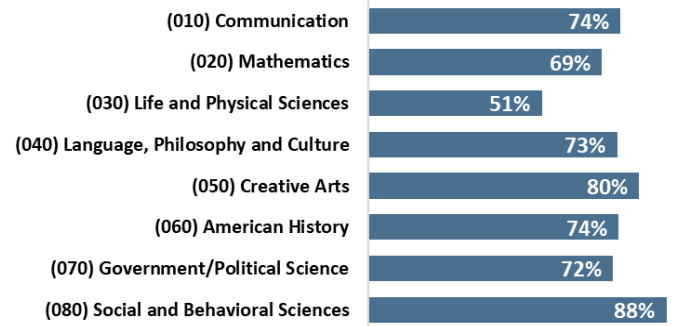
Age of Near Completers at Last Enrollment at TCC

■ Under 25 ■ 25 to 34 ■ 35 and Over

43%	34%	23%
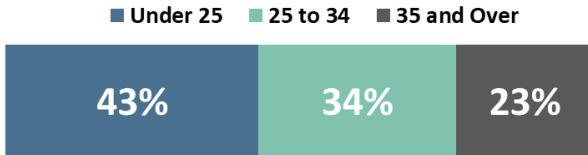
Core Completion

Both the Associate of Arts and Associate of Science require courses from the core curriculum. (Excluding the Associate of Applied Science, there were about 1,200 near completers.) For almost all component areas, at least 70% of the near completers earned the hours (i.e. course(s)) required in that component area. Life and Physical Sciences had the lowest percentage of near completers who met the required hours (51%) while Social and Behavioral Sciences had the highest percentage (88%).

Percent Completion

| Component	Percent
(010) Communication	74%
(020) Mathematics	69%
(030) Life and Physical Sciences	51%
(040) Language, Philosophy and Culture	73%
(050) Creative Arts	80%
(060) American History	74%
(070) Government/Political Science	72%
(080) Social and Behavioral Sciences	88%

Opportunity

TCC's recent near completers present an opportunity for TCC to recruit students who took the important, and for some most daunting, first step towards becoming a college graduate by putting themselves at the "start line" by beginning college. These students who have the "finish line" in sight demonstrated success in college through earning at least 45 hours (excluding developmental education) but lost momentum. With additional guidance, support, and focus, near completers could become graduates within one or two terms at TCC.

[1] https://nscresearchcenter.org/some-college-no-degree-2019/

[2] Enrollment by Term (exclude credit type N), Student Demographics, Student Programs, IR GPA

Six-Year Completion From Higher Ed.

■ Nation ■ Texas ■ Tarrant County College

Year	Nation	Texas	Tarrant County College
2011	38%	35%	37%
2012	39%	38%	38%
2013	41%	40%	40%
2014	41%	40%	38%
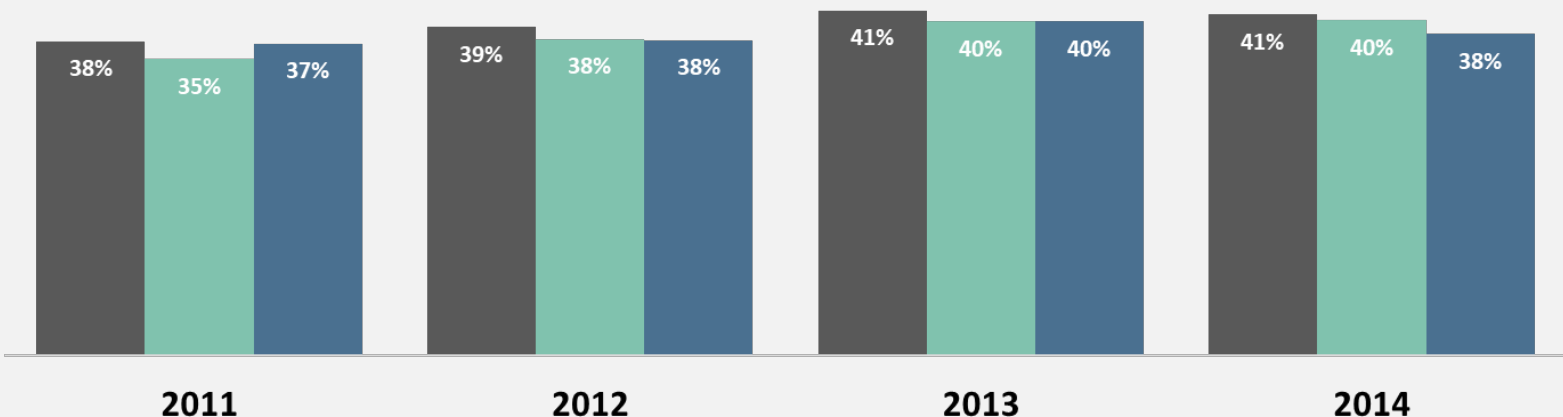
Metrics from the 2011 to 2015 Fall Degree-Seeking First Time in College (DS-FTIC) cohorts demonstrated the importance of early progression towards completion.

Stopping Out

About 70% of the cohort returned the spring semester following the first fall term. Of the approximately 30% who stopped out in the spring, there was about an 80% chance that the student had not returned after three years. About 10% of the stop outs returned after a one term stop out (i.e. stopped out in the spring and then returned the following fall), and about 10% returned after a one year to three year stop out.

Six-Year Graduation Rate from TCC

Overall, the six-year graduation rate for the DS-FTIC cohort was about 20%. However, the rate differed substantially based on whether a student had stopped out and how many hours they had earned in their first fall term (excluding developmental education). Students who returned the following spring (i.e. did not stop out)

were almost 3 times more likely to graduate from TCC within six years than students who stopped out one term and were almost 4 times more likely to graduate in six years than students who stopped out one to three years.

Moreover, the graduation rate increased when more hours were completed in the first fall term. For example, students who returned the following spring who had completed 1 to 5 hours in their first fall term were about equally likely to graduate from TCC in six years as students who stopped out in the spring, returned the following fall, and who had completed 6 to 11 hours in their first fall term.
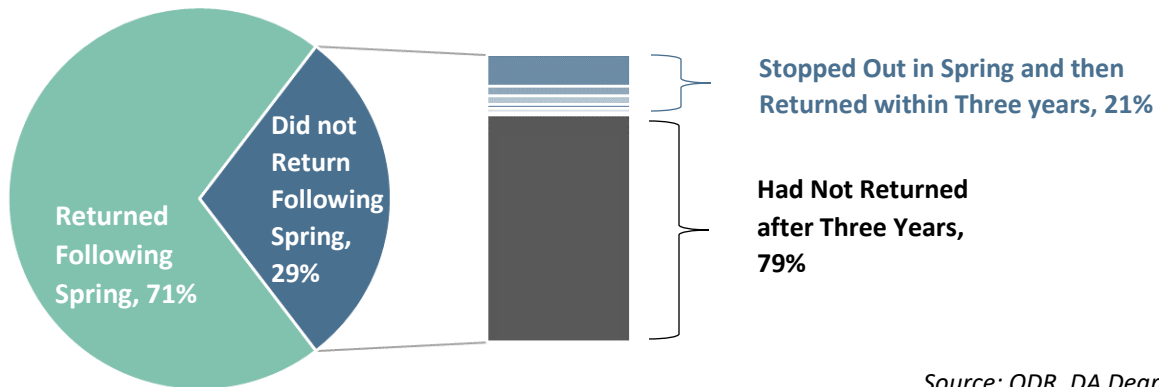
In sum, continued progress in terms of consistent enrollment after the first fall term and hours earned was associated with a higher six-year TCC graduation rate.

Definitions:

One Term Stop Out – was not enrolled in the spring or summer but re-enrolled in the following fall after first fall term

One Year Stop Out – was not enrolled in the spring, summer, or fall but re-enrolled in the second Spring after first fall term

DS FTIC – Retention Status

Returned Following Spring, 71%

Did not Return Following Spring, 29%

Stopped Out in Spring and then Returned within Three years, 21%

Had Not Returned after Three Years, 79%

Source: ODR, DA Degrees, IR GPA

DS-FTIC Six-Year Graduation Rate From TCC - By Hours Completed in First Fall Term and Retention Status

Returned Following Spring
- 0 hrs: 14%
- 1 to 5 hrs: 17%
- 6 to 11 hrs: 30%
- 12 or more hrs: 44%

Returned after One Term Stop Out
- 0 hrs: 5%
- 1 to 5 hrs: 10%
- 6 to 11 hrs: 16%
- 12 or more hrs: 23%

Returned after One Year to Three Year Stop Out
- 0 hrs: 6%
- 1 to 5 hrs: 9%
- 6 to 11 hrs: 8%
- 12 or more hrs: 7%

Data's Anatomy

DAN   DAPHNE   DAWSON
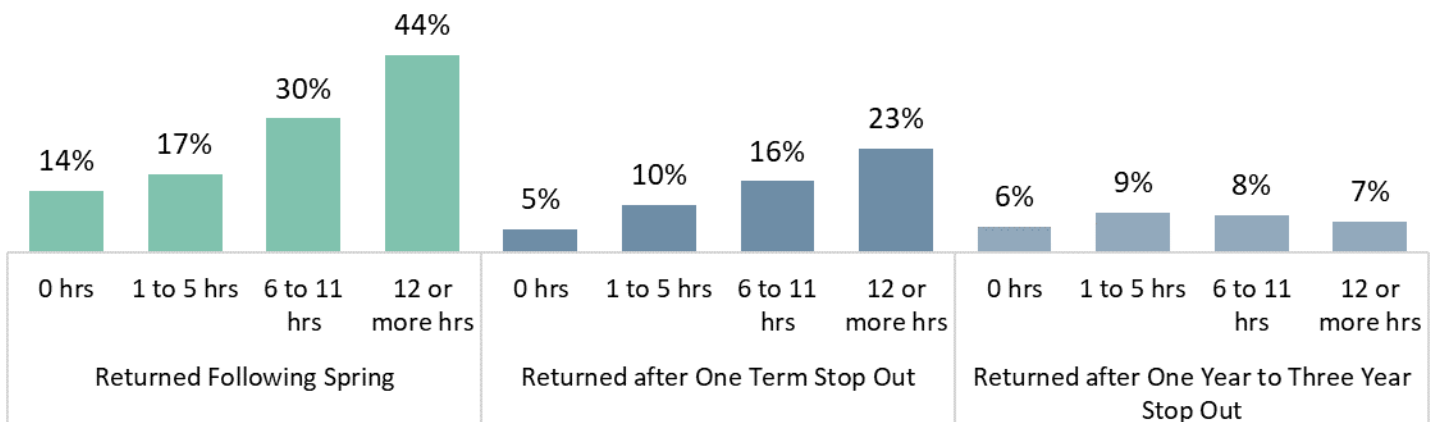
Coming Soon
Season 8
Fall 2022

Will the team get a new intern?
(*Topic: One College Reporting*)

How does Daphne handle the cold weather?
(*Topic: Data Timing and Freezing Files*)

Is the office haunted with a ghost?
(*Topic: Transferring into and out of TCC*)

Who steals Dan's parking spot?
(*Topic: Appropriate Data Uses*)

Stay tuned...

Data's Anatomy is IR's in-house video series, made to clarify important data terminology, calculations, and refresher tips on easily confused data concepts. Find them on our website!!

A NEW DIRECTION
Do students change programs?

So, what's your major?... It's perhaps the most frequently asked question of new college students. For some students, choosing a program may seem like a daunting task as they are uncertain of future career goals while others have dreamed of their future careers since childhood. In this report, we aim to better understand the prevalence of students changing programs at TCC.

PROGRAM PROFILE FOR COHORTS

The 2015FL to 2019FL first time in college (FTIC) cohorts averaged about 7,500 students per term. About three-fourths were only enrolled in transfer programs, and about 85% had only one program declared.

**Program Type**

Transfer, 75%

Technical, 14%

Both, 10%

CHANGING PROGRAMS

Overall, about three in four FTIC students returned the following spring after their first fall term. Of the returning students, roughly 95% were still enrolled in a program they had originally declared in prior term. Of the approximately six in ten FTIC students who returned

one year after their first fall term, about 90% were retained in their original program(s). Of the approximately one in three FTIC students who returned two years after their first fall term, roughly 80% were retained in their original program(s).

Approximate Retention in Program of those who returned:

95%

90%

80%

First Fall Term | One Term Later | One Year Later | Two Years Later
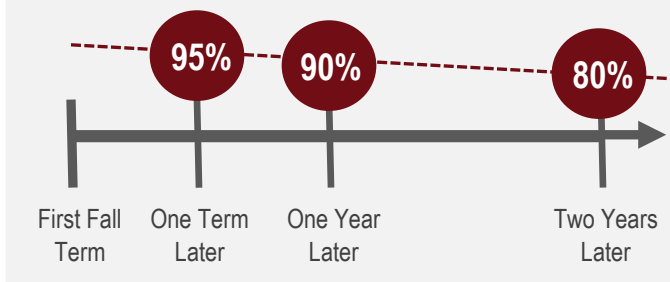
ADDING PROGRAMS

For those who started with one program and were retained the following spring in the same program, about 5% added at least one additional program. For those who started with one program and were retained the following fall in the same program, about 6% added at least one additional program.

Following Spring

Started in Program A in First Fall Term

Retained in Program A

Added Program B

5%
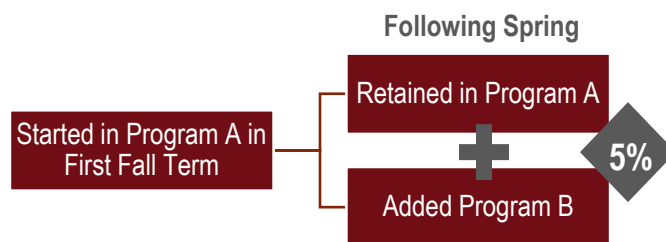
REMOVING PROGRAMS

For those who started with multiple programs in their first fall term and were retained the following spring in at least one of those programs, about 15% had just one program in the spring.
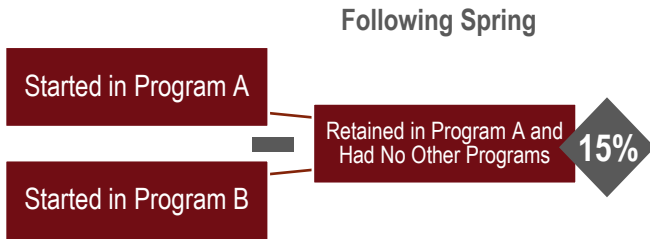
Following Spring

Started in Program A

Started in Program B

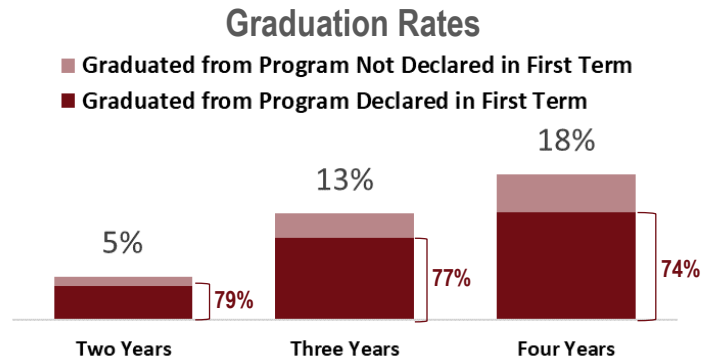Retained in Program A and Had No Other Programs — **15%**

Note: For FTIC students with multiple programs in their first fall term, retention and graduation were defined as being retained in/graduating from at least one of these original programs.

Sources: ODR, ST Student Enrollment (no credit type N), Student Degrees, and Student Programs

GRADUATION

Of FTIC students who graduated in two years, almost 80% graduated from a program they had declared in their first fall term. The proportion of graduates graduating from their initial major(s) decreased slightly over time. Of the 5% of FTIC students who graduated in two years, almost 80% graduated from what they had declared in their first fall term. Of the 18% of FTIC students who graduated in four years, almost 75% graduated from what they had declared in their first fall term.
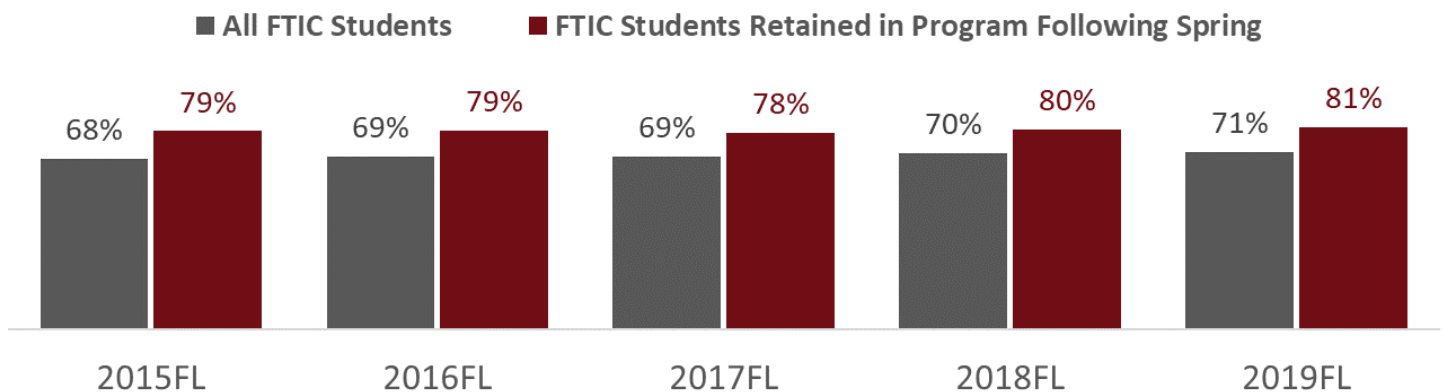
Graduation Rates

- ■ Graduated from Program Not Declared in First Term
- ■ Graduated from Program Declared in First Term

	Two Years	Three Years	Four Years
Total	5%	13%	18%
Declared	79%	77%	74%

FINDINGS:

- **FTIC students who returned were very likely to stay in their initial programs with only about 5% of those who were not spring stop-outs leaving programs they started their first fall term. While the percentage leaving initial programs grew over time, about 8 in 10 students who were enrolled two years after their first fall term were still in a program in which they had started their first fall term.**

- **Of FTIC graduates, about three-fourths graduated from a program they started their first fall term.**

These findings have implications for the importance of early program and career advising aimed at helping FTIC students start on pathways aligned with their interests and future careers. It is possible that picking the "right" program in their first term influences a FTIC student's decision to return to TCC since the majority of students who returned stuck with their first program choice. Program choice may also ultimately impact whether a student graduates since about three-fourths of FTIC graduates stayed with their initial choice.

First Fall Term Success Rates (A, B, C, CR)

- ■ All FTIC Students
- ■ FTIC Students Retained in Program Following Spring

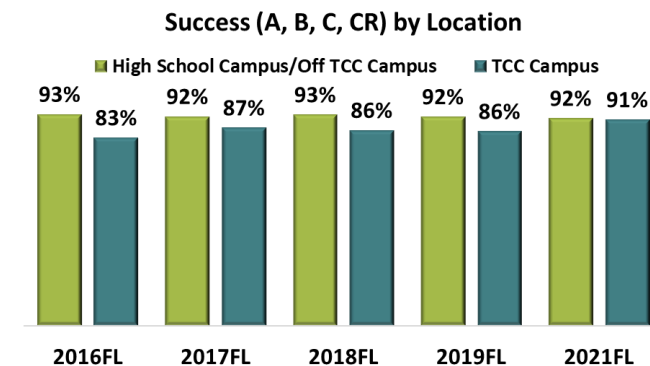|	2015FL	2016FL	2017FL	2018FL	2019FL
All FTIC Students	68%	69%	69%	70%	71%
Retained in Program Following Spring	79%	79%	78%	80%	81%

THE DUAL CREDIT EXPERIENCE
Does performance differ based on section location and type?

As the dual credit student population continues to grow and represents a large percentage of the total student population, understanding their experience and evaluating their success are crucial. Historically, the success rate for dual credit students has been very high – over 90%. However, the method in which the dual credit course is delivered could be a factor in success. Thus, the impacts of section location and section type are investigated using data from Fall 2016 to Fall 2021 (excluding Fall 2020*)

Dual Credit Success by Location

About 85% of dual credit course enrollments were in sections taught at the high school campus (HS) or an offsite location. On average, the success rate for students in offsite sections (93%) was about 6.5 percentage points higher than the success rate for students in sections on TCC campuses (86%). However, the gap between these groups was only about one percentage point in Fall 2021.

Success (A, B, C, CR) by Location

■ High School Campus/Off TCC Campus   ■ TCC Campus

	2016FL	2017FL	2018FL	2019FL	2021FL
HS/Off	93%	92%	93%	92%	92%
TCC	83%	87%	86%	86%	91%

~52,500 dual credit course enrollments in time frame examined.

The top-ten highest enrollment courses for dual credit accounted for almost 90% of all dual credit course enrollment. With the exception of MATH-1342, which had only a small number of enrollments on a TCC campus, students offsite outperformed those on TCC campuses with a difference of 5 percentage points or more between groups for half of the top-ten courses. (Note that the enrollment in sections on TCC campuses was much smaller than the enrollment in offsite sections for all of the top-ten courses.)

	HS/Off TCC Campus		TCC Campus	
	Enrolls	Success	Enrolls	Success
ENGL-1301	14,176	93%	1,211	82%
HIST-1301	7,825	93%	1,044	84%
GOVT-2305	5,420	92%	1,207	91%
ENGL-2322	3,809	97%	351	90%
ECON-2301	3,741	92%	164	87%
ENGL-1302	3,193	97%	116	93%
MATH-1314	1,192	84%	280	79%
PSYC-2301	616	94%	388	91%
MATH-1342	922	84%	31	94%
SOCI-1301	394	92%	104	75%

* Fall 2020 was excluded since this term was during remote teaching and the location/modality (online, hybrid, face-to-face) likely differed by ISD and/or student choice. The success for dual credit courses was roughly 5 percentage points lower this term.

Dual Credit Success by Section Type

Some dual credit students were enrolled in sections built solely for dual credit/high school students (DC sections), and others were in sections with both dual credit students and non-dual credit/older non-high school students (mixed). While sections taught at the high school campus (HS) or offsite location were not mixed sections, about half of dual credit course enrollments on TCC campuses were in mixed sections. On average, the success rate for students in DC sections (85%) was about 2 percentage points lower than the success rate for students in mixed sections (87%). However, Fall 2017 was an anomaly.
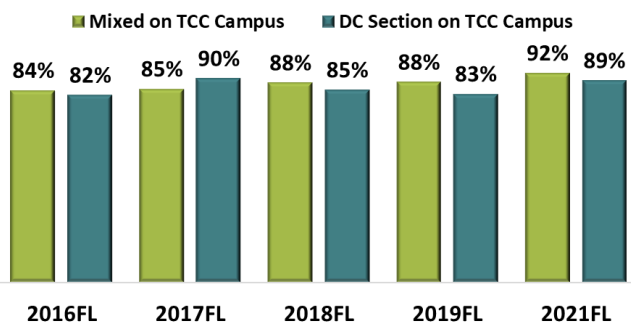
	Mixed Section		DC Section	
	Enrolls	Success	Enrolls	Success
ENGL-1301	497	**91%**	714	76%
GOVT-2305	344	87%	863	**93%**
HIST-1301	378	**87%**	666	82%
PSYC-2301	160	89%	228	**93%**
ENGL-2322	47	**96%**	304	89%

Success (A, B, C, CR) Section Type

Legend: ■ Mixed on TCC Campus ■ DC Section on TCC Campus

2016FL	2017FL	2018FL	2019FL	2021FL
84% 82%	85% 90%	88% 85%	88% 83%	92% 89%

~7,500 dual credit course enrollments on TCC campuses.

For the top-five highest enrollment courses for dual credit enrollment on TCC campuses, dual credit students in mixed sections outperformed those in DC sections in ENGL-1301, HIST-1301, and ENGL-2322 but not GOVT-2305 or PSYC-2301.

Conclusion

In sum, dual credit students in sections taught at the high school campus or an offsite location outperformed their counterparts. Among dual credit students on TCC campuses, those in mixed sections outperformed their counterparts. However, success may not be the only metric that should be considered when evaluating the dual credit experience since other aspects of the experience may be harder to measure. For example, compared to on-campus dual credit students, students who take dual credit at their high school could perceive or experience a different level of access to TCC resources such as advising, academic labs, and libraries. In addition, on-campus dual credit students gain more exposure to the college culture, which may provide valuable early experiences navigating college prior to attending college after graduating from high school.

Source: Enrollment by Term (excluded credit type N, audits, and missing grades)
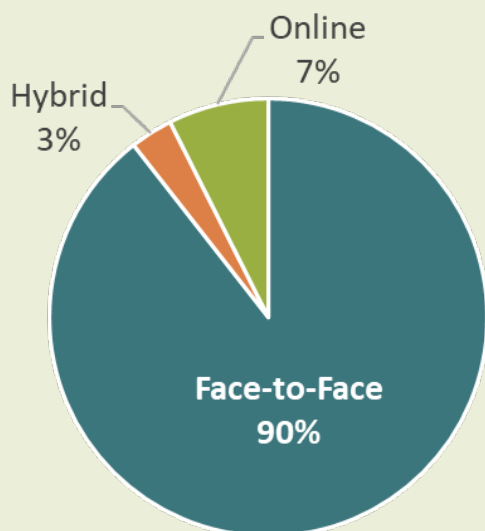
Modality: Online Versus Face-to-Face

Pie chart labels: Online 7%, Hybrid 3%, Face-to-Face 90%

Face-to-face: Comprised about **90% of dual credit** course enrollments and had about a **92% success rate**

Hybrid: Comprised about **3% of dual credit** course enrollments and had about a **92% success rate**

Online: Comprised about **7% of dual credit** course enrollments and had about an **87% success rate**

Learning Loss in High Schools During the Pandemic?
Academic Preparedness of Incoming College Students

At the beginning of the pandemic, institutions of higher education had to be laser focused on serving their students in the immediate transition to remote learning. Now, about two years later institutions are faced with considering COVID-19's potential long-term impacts on higher ed's future students. Questions arise regarding academic preparedness as well as expectations for methods of instruction for students who have spent the last two years in a combination of virtual learning and socially-distanced, isolated face-to-face learning. As feeder ISDs into Tarrant County College, region 11's Tarrant County ISDs' outcomes from end of course exams were investigated to gauge possible changes in preparedness for incoming students. (Evolving expectations for methods of instruction such as online versus face-to-face have been presented in prior articles of *IR Corner* and will continue to be researched in the upcoming years.)
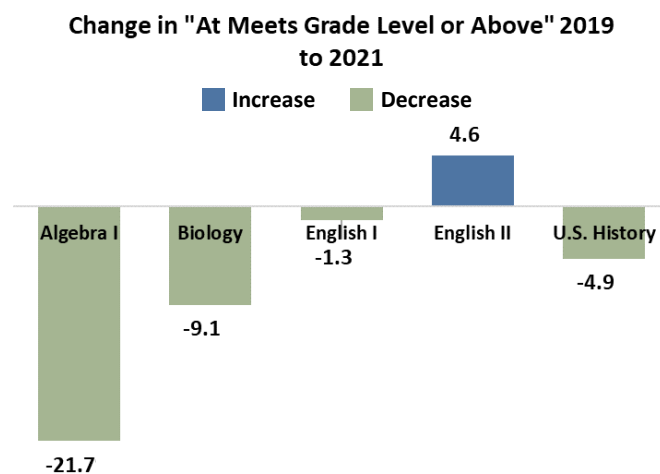
Beginning of the Pandemic Loss

Based on optional beginning-of-the-year data from assessments administered from July 27, 2020, to October 16, 2020, a report from the Texas Education Agency (TEA) stated the number of students below grade level is likely to rise significantly. Results indicated that the "COVID-19" slide, reflecting school closures from March 2020 until the end of the 2019-2020 school year, was 5.7 months, which was a 3.2-month addition to the typical summer loss of 2.5 months. In Texas, historically, only about 4% of students who are below grade level catch up to grade level over two years.[1]

First End of Course Exams During Pandemic

Texas students have learning objectives assessed by the State of Texas Assessments of Academic Readiness (STAAR) exam. Pre- and post-pandemic success rates were compared using end of course exams from 2019 and 2021. (Note: The STAAR test was not administered in 2020 due to the pandemic.)

Among ISDs in Tarrant County, the end of course exam for Algebra I had the largest decline in the percentage of students who met grade level or above – almost a 22 percentage point decline from 2019 to 2021. The end of course Biology exam had the second largest decline – about a 9 percentage point decline. Unlike the other courses, the percentage of students who met grade level or above increased for English II – almost a 5 percentage point increase.[2]

Change in "At Meets Grade Level or Above" 2019 to 2021

Increase ■ Decrease ■

Algebra I	-21.7
Biology	-9.1
English I	-1.3
English II	4.6
U.S. History	-4.9

Implications for TCC:

- The percentage of incoming students who enroll in a college-level course who are required to co-enroll in a developmental education/ NCBO math course may increase.

- In general, incoming students enrolled in traditional first year ("Gateway") courses such as English, Math, Biology, and History may need additional academic support targeted at getting students "up to speed" on course material that should have been learned as a basis for the course in which the student is enrolled.
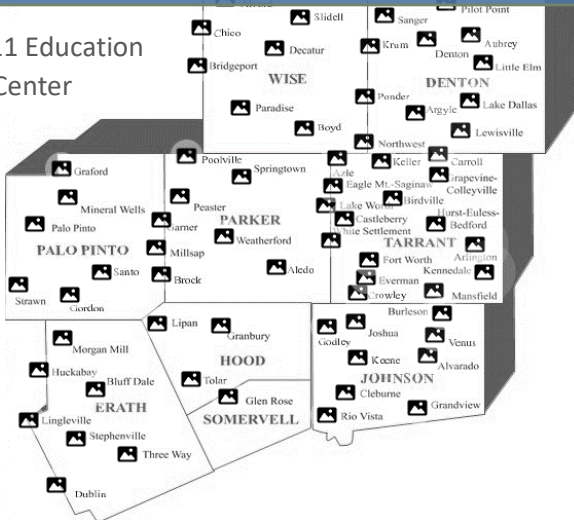
[1] https://tea.texas.gov/sites/default/files/covid/Supt-Call-Learning-Acceleration%20Slides.pdf?msclkid=9c99766fba9111ec83ec411779d8e543Acceleration%20Slides.pdf?msclkid=9c99766fba9111ec83ec411779d8e543

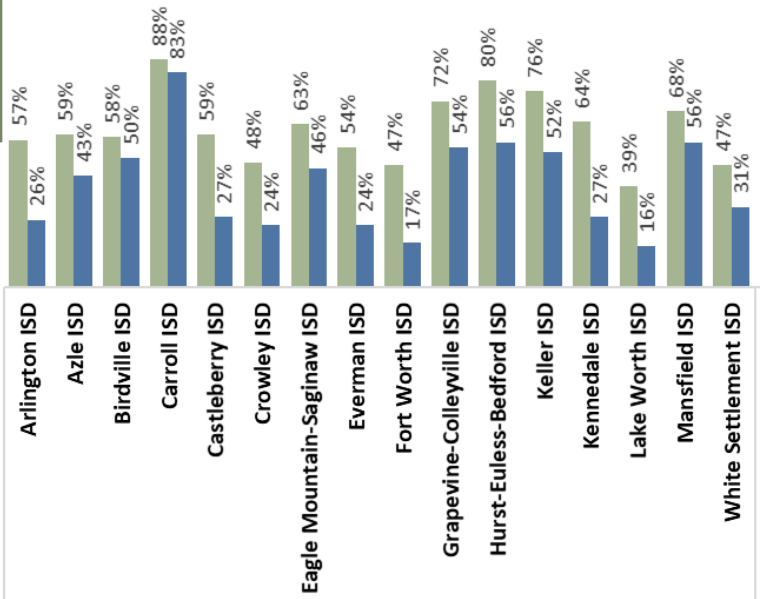[2] https://rptsvr1.tea.texas.gov/perfreport/tapr/tapr_srch.html?srch=D

End of Course Outcomes for Tarrant County – 2019 and 2021
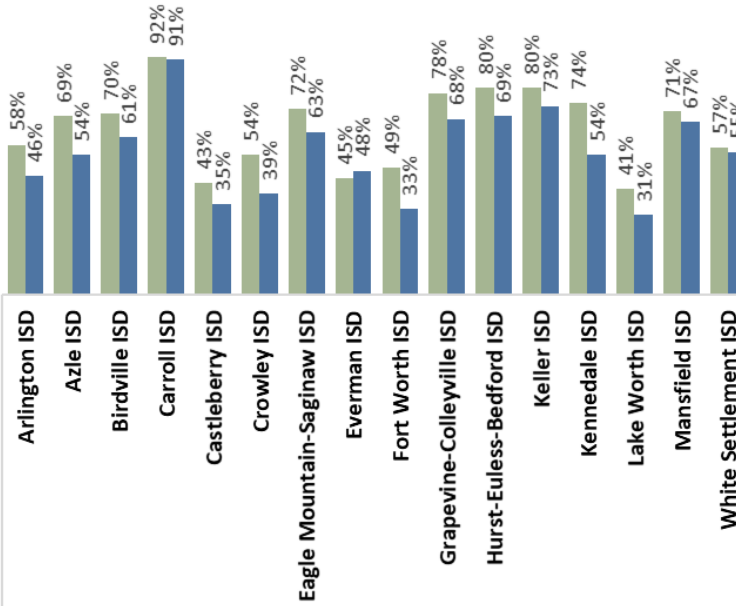## *At Meets Grade Level or Above*
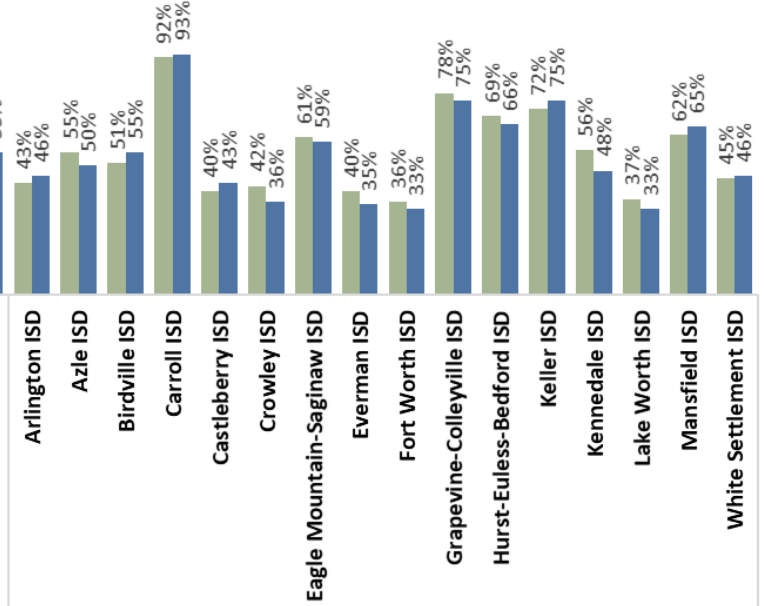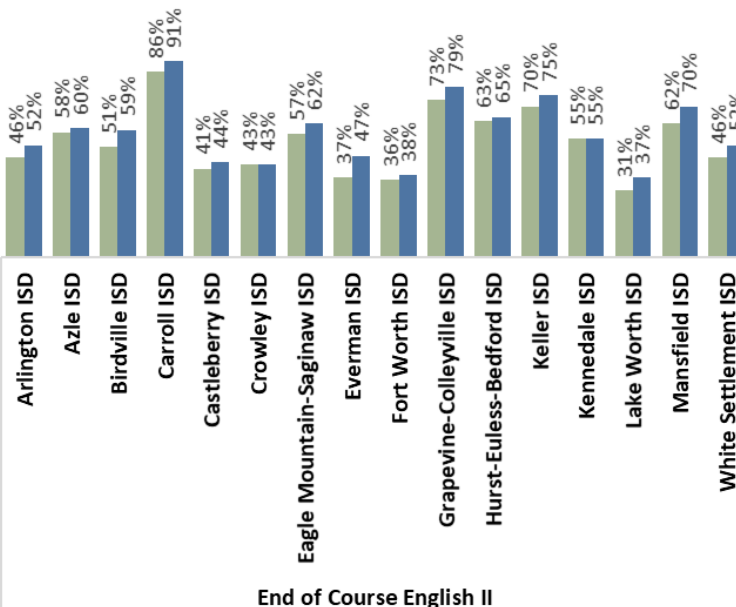
Region 11 Education Service Center

2019 **2021**

End of Course Algebra I

District	2019	2021
Arlington ISD	57%	26%
Azle ISD	59%	43%
Birdville ISD	58%	50%
Carroll ISD	88%	83%
Castleberry ISD	59%	27%
Crowley ISD	48%	24%
Eagle Mountain-Saginaw ISD	63%	46%
Everman ISD	54%	24%
Fort Worth ISD	47%	17%
Grapevine-Colleyville ISD	72%	54%
Hurst-Euless-Bedford ISD	80%	56%
Keller ISD	76%	52%
Kennedale ISD	64%	27%
Lake Worth ISD	39%	16%
Mansfield ISD	68%	56%
White Settlement ISD	47%	31%

End of Course Biology

District	2019	2021
Arlington ISD	58%	46%
Azle ISD	69%	54%
Birdville ISD	70%	61%
Carroll ISD	92%	91%
Castleberry ISD	43%	35%
Crowley ISD	54%	39%
Eagle Mountain-Saginaw ISD	72%	63%
Everman ISD	45%	48%
Fort Worth ISD	49%	33%
Grapevine-Colleyville ISD	78%	68%
Hurst-Euless-Bedford ISD	80%	69%
Keller ISD	80%	73%
Kennedale ISD	74%	54%
Lake Worth ISD	41%	31%
Mansfield ISD	71%	67%
White Settlement ISD	57%	55%

End of Course English I

District	2019	2021
Arlington ISD	43%	46%
Azle ISD	55%	50%
Birdville ISD	51%	55%
Carroll ISD	92%	93%
Castleberry ISD	40%	43%
Crowley ISD	42%	36%
Eagle Mountain-Saginaw ISD	61%	59%
Everman ISD	40%	35%
Fort Worth ISD	36%	33%
Grapevine-Colleyville ISD	78%	75%
Hurst-Euless-Bedford ISD	69%	66%
Keller ISD	72%	75%
Kennedale ISD	56%	48%
Lake Worth ISD	37%	33%
Mansfield ISD	62%	65%
White Settlement ISD	45%	46%

End of Course English II

District	2019	2021
Arlington ISD	46%	52%
Azle ISD	58%	60%
Birdville ISD	51%	59%
Carroll ISD	86%	91%
Castleberry ISD	41%	44%
Crowley ISD	43%	43%
Eagle Mountain-Saginaw ISD	57%	62%
Everman ISD	37%	47%
Fort Worth ISD	36%	38%
Grapevine-Colleyville ISD	73%	79%
Hurst-Euless-Bedford ISD	63%	65%
Keller ISD	70%	75%
Kennedale ISD	55%	55%
Lake Worth ISD	31%	37%
Mansfield ISD	62%	70%
White Settlement ISD	46%	52%

End of Course U.S. History

| District	2019	2021
Arlington ISD	71%	64%
Azle ISD	75%	70%
Birdville ISD	79%	73%
Carroll ISD	96%	94%
Castleberry ISD	76%	64%
Crowley ISD	67%	58%
Eagle Mountain-Saginaw ISD	76%	76%
Everman ISD	57%	56%
Fort Worth ISD	66%	53%
Grapevine-Colleyville ISD	88%	86%
Hurst-Euless-Bedford ISD	83%	79%
Keller ISD	89%	85%
Kennedale ISD	75%	73%
Lake Worth ISD	52%	49%
Mansfield ISD	79%	77%
White Settlement ISD	70%	64%

TSI Assessment Retesting

Data presented in the Texas Success Initiative (TSI) article in December 2021 showed that a large percentage of students retake the TSI assessment. For both Math and English, about 25-30% of students took the assessment more than one time.[1] This analysis examines those students who retested the TSI assessment and if their placements changed after subsequent tests.

Did Students Score Better the More Times They Took the TSI Assessment?

Progression from one test attempt to another was made by comparing students' initial assessment scores to their best assessment scores, grouped by their total number of test attempts. Students could be placed into Adult Basic Education (ABE), Developmental Education (DE), or College Level (CL) during each assessment attempt.
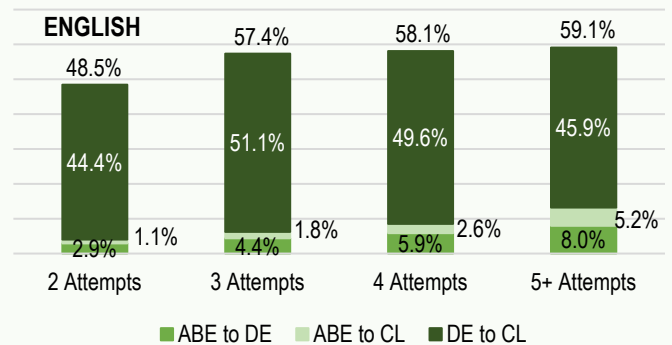
For students who attempted the **Math** assessment twice, about 43.8% improved their scores. As students increased their attempts, more students improved upon their scores.

The greatest change was seen in students moving from ABE to DE, where 17.4% of students who attempted the test five or more times moved from ABE to DE compared to 9.4% of students who attempted the assessment only twice.
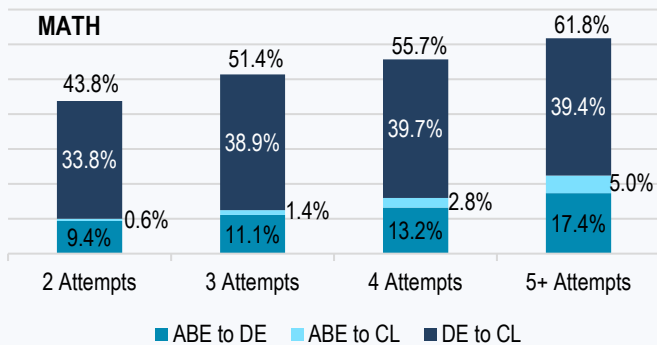
For students who attempted the **English** assessment twice, about 48.5% improved their scores. As students increased their attempts, more students improved upon their scores.

However, the improvement from DE to CL lowered as the number of attempts increased. The greatest improvement was seen between two and three attempts where 51.1% of third attempts transition from DE to CL compared to 44.4% of students who attempted the assessment only twice.

MATH

	2 Attempts	3 Attempts	4 Attempts	5+ Attempts
Total	43.8%	51.4%	55.7%	61.8%
DE to CL	33.8%	38.9%	39.7%	39.4%
ABE to CL	0.6%	1.4%	2.8%	5.0%
ABE to DE	9.4%	11.1%	13.2%	17.4%

■ ABE to DE ■ ABE to CL ■ DE to CL

ENGLISH

	2 Attempts	3 Attempts	4 Attempts	5+ Attempts
Total	48.5%	57.4%	58.1%	59.1%
DE to CL	44.4%	51.1%	49.6%	45.9%
ABE to CL	1.1%	1.8%	2.6%	5.2%
ABE to DE	2.9%	4.4%	5.9%	8.0%

■ ABE to DE ■ ABE to CL ■ DE to CL

Did the TSI2 Assessment Criteria Change How Students Performed in Retests?

To compare testing prior to and after the TSI2 implementation in January 2021, students were grouped into additional* categories: **Before** (initial and best assessments earned prior to change) and **After** (initial and best assessments earned after change).

Initial Placement	Math		English	
	Before	After	Before	After
ABE	17%	12%	5%	50%
DE	56%	61%	48%	17%
CL	27%	27%	47%	33%

After TSI2, 50% of initial English placements resulted in ABE, compared to 5% before TSI2.
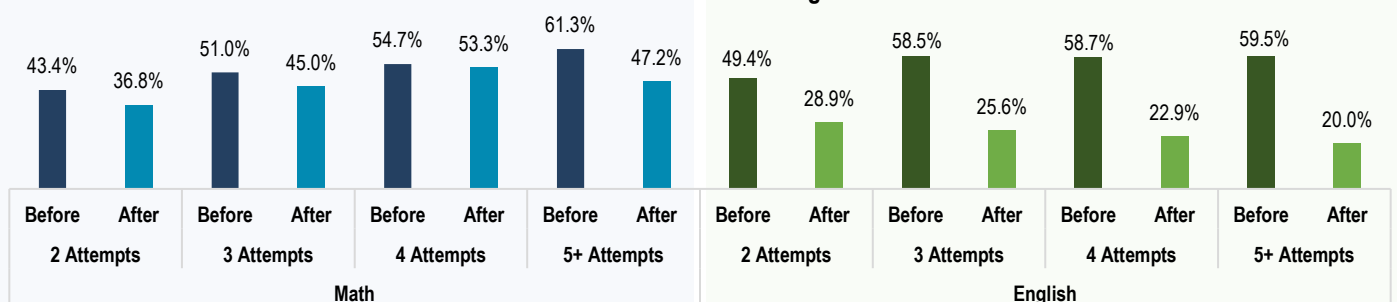
For the **Math Before** group, the percent of students moving from ABE to DE increased as the assessment attempts increased while the percentage decreased for the After group.

For the **Math After** group, over 44% of students attempting for the fourth or more times moved from DE to CL while the **Before** group plateaued at about 39% after the third attempt.

For the **English Before** group, the percent of students moving from DE to CL remained between about 46% to 53% of students for each attempt group.

For the **English After** group, less than 5% of students attempting the test twice progressed from DE to CL, and subsequently less than 3% of each additional attempt group progressed from DE to CL.

Percent of Students who Progressed

Math

	Before	After	Before	After	Before	After	Before	After
	43.4%	36.8%	51.0%	45.0%	54.7%	53.3%	61.3%	47.2%
	2 Attempts		3 Attempts		4 Attempts		5+ Attempts	

English

	Before	After	Before	After	Before	After	Before	After
	49.4%	28.9%	58.5%	25.6%	58.7%	22.9%	59.5%	20.0%
	2 Attempts		3 Attempts		4 Attempts		5+ Attempts	

[1] *TSI:* https://www.tccd.edu/documents/about/research/institutional-intelligence-and-research/iir-corner/2021-12-IR-corner.pdf
Source: Student Tests (8/1/2013 – 4/29/2022; not all assessments were administered at TCC), Enrollment by Term
* Before – After Grouping: First assessment taken prior to change and best assessment earned after change; excluded due to small headcounts

Key Findings:

- **MATH** – The initial placement for students who took the new TSI Math assessment was similar to the placement of the old assessment. However, the percentage of students who moved up after multiple attempts was lower for the new TSI Math assessment. Students who took ABE math were more likely to have progressed within a year to Math 1332 than Math 1314 or Math 1342, but less than one-third progressed to the courses.

- **ENGLISH** – The initial placement for students who took the new TSI English assessment was rather different from the placement of the old assessment. Over half of the students placed in ABE, and the percentage who moved up a level did not increase as the number of testing attempts increased. In addition, less than half of the students who took ABE English progressed to English 1301 within two years. Thus, the ABE placement/new test could be presenting a larger barrier to completing college-level English than existed before.

Do Students Progress from ABE to CL Math and English?

Students who took ABE math or English in a fall or spring term between 2018-2019 and 2020-2021 were tracked to determine enrollment and success in college-level courses. One year progression for fall students, for example, meant that a student progressed from taking ABE for the first time in the fall to taking the college-level course by the end of the following fall.
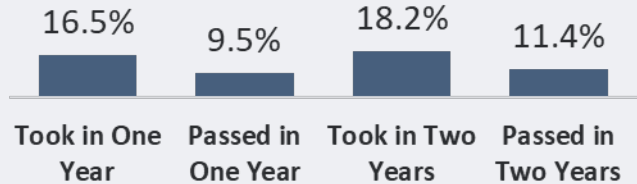
Math 1314: About 4.5% of ABE students took the course within one year of taking ABE math (Math 0090) for the first time, and about 2.5% completed the course within a year. Of those who took the course within a year, 55.7% passed.

About 7.8% of ABE students took the course within two years of taking ABE math (Math 0090) for the first time, and about 4.6% completed the course within two years. Of those who took the course within two years, 59.9% passed.


4.5%	2.5%	7.8%	4.6%
Took in One Year	Passed in One Year	Took in Two Years	Passed in Two Years
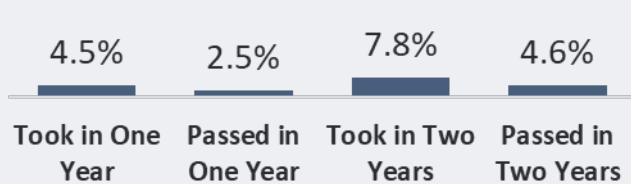
Math 1332: About 16.5% of ABE students took the course within one year of taking ABE math (Math 0090) for the first time, and about 9.5% completed the course within a year. Of those who took the course within a year, 57.4% passed.

About 18.2% of ABE students took the course within two years of taking ABE math (Math 0090) for the first time, and about 11.4% completed the course within two years. Of those who took the course within two years, 62.4% passed.

16.5%	9.5%	18.2%	11.4%
Took in One Year	Passed in One Year	Took in Two Years	Passed in Two Years

Math 1342: About 8.6% of ABE students took the course within one year of taking ABE math (Math 0090) for the first time, and about 4.4% completed the course within a year. Of those who took the course within a year, 51.2% passed.

About 11.7% of ABE students took the course within two years of taking ABE math (Math 0090) for the first time, and about 6.3% completed the course within two years. Of those who took the course within two years, 53.9% passed.

8.6%	4.4%	11.7%	6.3%
Took in One Year	Passed in One Year	Took in Two Years	Passed in Two Years
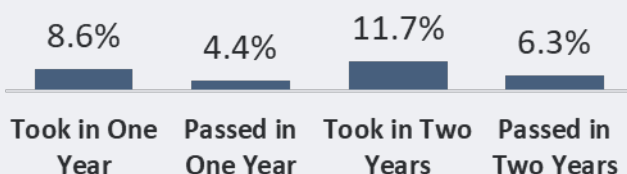
English 1301: About 42.3% of ABE students took the course within one year of taking ABE English (INRW 0090) for the first time, and about 28.4% completed the course within a year. Of those who took the course within a year, 67.2% passed.

About 45.4% of ABE students took the course within two years of taking ABE English (INRW 0090) for the first time, and about 29.5% completed the course within two years. Of those who took the course within two years, 65.0% passed.


42.3%	28.4%	45.4%	29.5%
Took in One Year	Passed in One Year	Took in Two Years	Passed in Two Years
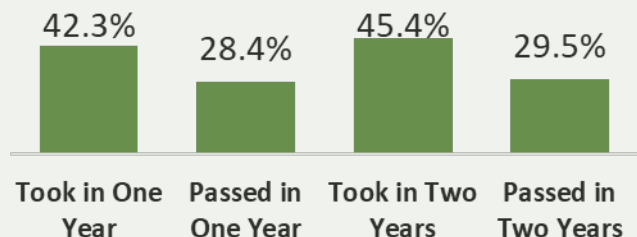
STUDENT-INITIATED WITHDRAWALS

When do students withdraw? & What are potential indicators?

Student-Initiated Withdrawal Rate

For the fall terms from 2016 to 2021, the student-initiated withdrawal rate for 16-week courses was consistently between about 8% and 9% except for Fall 2020. While the withdrawal pattern for Fall 2020 trended similarly initially, there was a larger spike in withdrawals in Week 12 or after, which caused the Fall 2020 withdrawal rate to grow to about 12% - about 3 to 4 percentage points higher than the typical fall rate.

Student-Initiated Withdrawal Rate in 16-Week Courses

Year	Rate
2016FL	8.9%
2017FL	9.2%
2018FL	8.7%
2019FL	8.5%
2020FL	12.1%
2021FL	8.3%
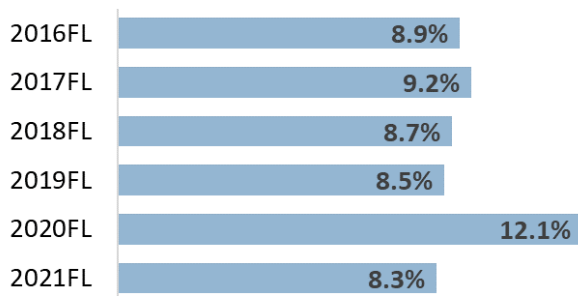
Student-Initiated Withdrawal Pattern

Typically, about 4% to 5% of student-initiated withdrawals occurred prior to Week 4. Each week from Week 4 through Week 11 accounted for about 8% to 10% of withdrawals. Roughly 20% of withdrawals occurred in Week 12 or after.

Student-Initiated Withdrawal Pattern in 16-Week Courses

Legend: 2016FL, 2017FL, 2018FL, 2019FL, 2020FL, 2021FL

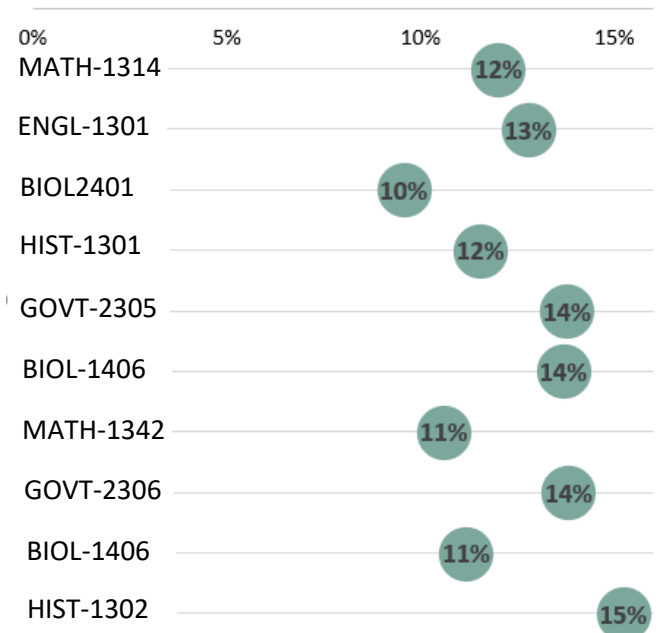(Line chart: Week 3 through 12+, y-axis 0% to 40%)
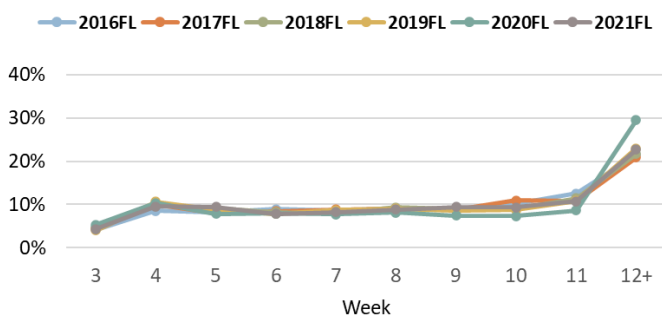
Online Courses

The withdrawal pattern for online courses differs markedly from non-online courses.

- From 2016 to 2019 (fall terms), the student-initiated withdrawal rate in 16-week online courses (about 12%) was about four percentage points higher than other courses. However, in Fall 2021, the withdrawal rate for online courses was only about 1 percentage point higher than not online.

- Historically, for non-online courses, about 13% of student-initiated withdrawals in 16-week courses occurred by the end of Week 4; whereas over 20% occurred by the end of Week 4 in online courses.

High Withdrawal Courses

Among the top-ten 16-week courses for student-initiated withdrawals, the percentage of withdrawals by the end of Week 4 ranged from about 10% to 15%.

Percent of Student-Initiated Withdrawals in 16-Week Courses That Occurred First Four Weeks
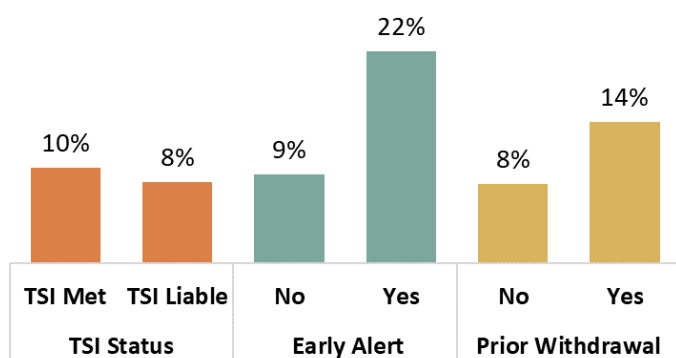
Course	Percent
MATH-1314	12%
ENGL-1301	13%
BIOL2401	10%
HIST-1301	12%
GOVT-2305	14%
BIOL-1406	14%
MATH-1342	11%
GOVT-2306	14%
BIOL-1406	11%
HIST-1302	15%

IN 16-WEEK COURSES

Potential Withdrawal Indicators

Academic preparedness, early academic performance/ early engagement issues, and a prior history of withdrawals were some hypothesized potential factors associated with withdrawing. TSI status was used as a proxy for academic preparedness. Receiving an alert for academic performance and/or attendance prior to census day provided data for early performance or engagement issues in class, and withdrawing from at least one course in the prior academic year indicated a history of withdrawing.

Student-Initiated Withdrawal Rate in 16-Week Courses

TSI Status: Interestingly, the student-initiated withdrawal rate in 16-week courses was about 2 percentage points higher for TSI met (academically prepared) students than TSI liable students. (Note: when including faculty-initiated withdrawals these groups had almost equivalent withdrawal rates)

Early Alerts: The student-initiated withdrawal rate in 16-week courses was almost 13 percentage points higher for students who received an attendance or assignment alert prior to census day than students who did not receive an alert prior to census.

Withdrawal in Prior Academic Year: The student-initiated withdrawal rate in 16-week courses was about 6 percentage points higher for students who had at least one W in the prior academic year than students who did not have a W in the prior academic year.

Findings

In sum, the student-initiated withdrawal rate for 16-week fall courses has historically been near 9%. After a large increase in Fall 2020, the rate returned closer to pre-pandemic levels with the Fall 2021 rate being slightly lower than fall terms prior to the pandemic. The withdrawal rate for online courses in pre-pandemic fall terms was about 4 percentage points higher than non-online courses. This gap could be a contributing factor to an increased withdrawal rate seen in Fall 2020 when almost all courses were offered online. Note that the increase in Fall 2020 was about 3 to 4 percentage points compared to prior fall terms. In addition, students who withdrew from online courses were more likely to have withdrawn in the first month of the course compared to students who withdrew from non-online courses. Lastly, receiving an early alert prior to census day and having withdrawn from a course in the prior academic year were strong indicators of student-initiated withdrawals in 16-week courses.

Prior research suggested that students who received an early alert early in the course benefitted greatly from the academic support received when visiting a lab (*Changing Course: Academic Support after Early Intervention – IR Corner June 2021 Issue 2*). Specifically, students who received an alert in the first three weeks and then visited a lab three or more times after that alert were almost 3 times less likely to withdraw from the course than students who received an alert in the first three weeks and did not visit a lab.

Source: Enrollment by Term (no credit type N) and ST Early Alerts

TCC Data THROUGH

From 1965 up to our current pandemic-world, Tarrant County College's history has been filled with unique and noteworthy events. Highlighted here are a few key moments reinforced by data. Enjoy a trip down memory lane….

1965: Dr. Joe B Rushing selected as Tarrant County Junior College's (TCJC) first CEO

1967: South Campus opens with **36 programs and 4,194 students**

1968: Northeast Campus opens, and **two students graduate from TCJC**

1976: Northwest Campus opens

1977: TCJC headcount hits **19,257 students, and the 100,000th student enrolled**

1987: TCJC headcount hits **24,490 students**

1988: Mr. CA Roberson appointed as Chancellor

1996: Southeast Campus opens

1997: TCJC headcount hits **25,779 students**, and Dr. Leonardo de la Garza appointed as Chancellor

1999: TCJC becomes Tarrant County College (TCC)

2007: TCC headcount hits **37,984 students**

2009: Trinity River Campus opens on the Radio Shack headquarters

2010: Mrs. Erma Johnson Hadley appointed as Chancellor

2010-11: Marine Creek Early Collegiate High School opens at the Northwest Campus

2013: Trinity River East Campus opens

2014-15: TCC Connect campus opens

2016: Dr. Eugene Giovanni appointed as Chancellor

2017: TCC headcount hits **52,956 students**

2020: Global Coronavirus pandemic forces a majority of TCC courses to be delivered virtually

2021-2022: Collectively, over **900,000 credit students have been served at TCC and over 120,000 graduates** have completed a degree or certificate at TCC

1967   1968   1976

SOUTH (1967)

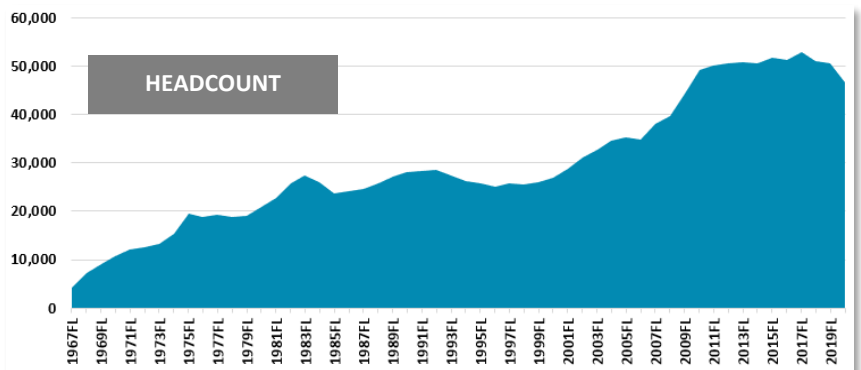**NORTHEAST (1968)**

NORTHWEST (1976)

Sources: DA Degrees, Enrollment Data by Term, Student Programs, TCC website
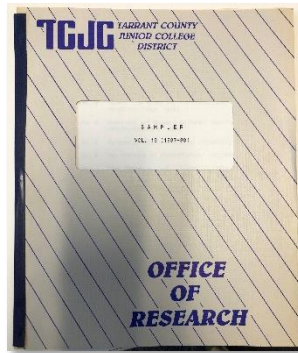
HEADCOUNT

The first year of students at TCJC (1967) included **4,194 students**.

The highest fall headcount at TCC occurred in 2017FL, reaching **52,956 credit students**.

Collectively, over **900,000 undergraduate credit students** have been served at TCC.

HEADCOUNT

TIME

TCJC TARRANT COUNTY JUNIOR COLLEGE DISTRICT

SAMPLER

OFFICE OF RESEARCH

GRADUATES

In 1968, there were **two graduates** from TCJC.

Between 1974 and 1999, each year produced between **1,000 and 2,000 graduates**. Since 2000, TCC has graduated – **on average – about 4,500 students** per year.

Collectively since the school's inception, **over 120,000**

GRADUATES
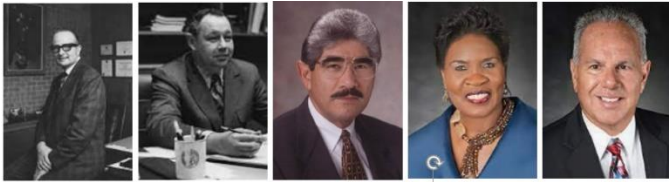
CHANCELLORS

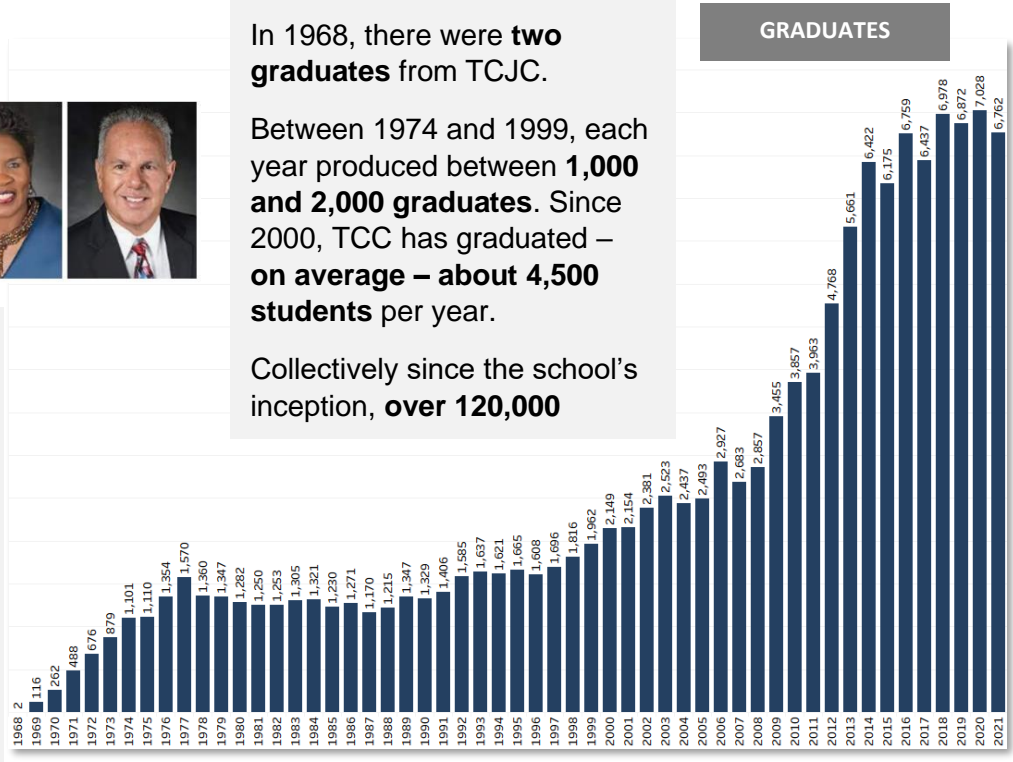There have been **five leaders** of the college.

1965: Dr. Joe B. Rushing

1988: Mr. C. A. Roberson

1997: Dr. Leonardo de la Garza

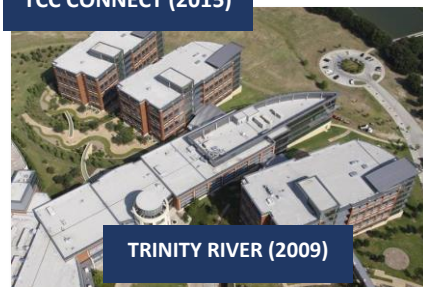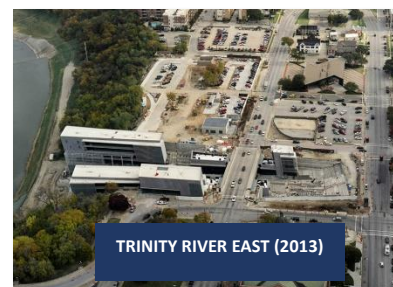**2010**: Mrs. Erma Johnson Hadley
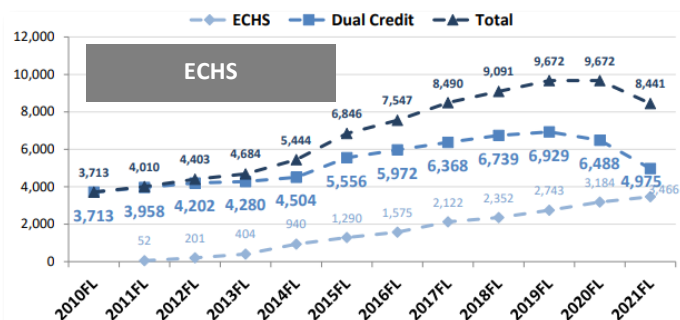
2016: Dr. Eugene Giovannini

Graduates by year: 1968: 2; 1969: 116; 1970: 262; 1971: 488; 1972: 676; 1973: 879; 1974: 1,101; 1975: 1,110; 1976: 1,354; 1977: 1,570; 1978: 1,360; 1979: 1,347; 1980: 1,282; 1981: 1,250; 1982: 1,253; 1983: 1,305; 1984: 1,321; 1985: 1,230; 1986: 1,271; 1987: 1,170; 1988: 1,215; 1989: 1,347; 1990: 1,329; 1991: 1,406; 1992: 1,585; 1993: 1,637; 1994: 1,621; 1995: 1,665; 1996: 1,608; 1997: 1,696; 1998: 1,816; 1999: 1,962; 2000: 2,149; 2001: 2,154; 2002: 2,381; 2003: 2,523; 2004: 2,437; 2005: 2,493; 2006: 2,927; 2007: 2,683; 2008: 2,857; 2009: 3,455; 2010: 3,857; 2011: 3,963; 2012: 4,768; 2013: 5,661; 2014: 6,422; 2015: 6,175; 2016: 6,759; 2017: 6,437; 2018: 6,978; 2019: 6,872; 2020: 7,028; 2021: 6,762

1996

SOUTHEAST (1996)

TCC CONNECT (2015)

2009

TRINITY RIVER (2009)

2013 **2015**

TRINITY RIVER EAST (2013)

2020

ECHS

ECHS — Dual Credit — Total

ECHS: 2010FL: 52; 2011FL: 201; 2012FL: 404; 2013FL: 940; 2014FL: 1,290; 2015FL: 1,575; 2016FL: 2,122; 2017FL: 2,352; 2018FL: 2,743; 2019FL: 3,184; 2020FL: 3,466

Dual Credit: 2010FL: 3,713; 2011FL: 3,958; 2012FL: 4,202; 2013FL: 4,280; 2014FL: 4,504; 2015FL: 5,556; 2016FL: 5,972; 2017FL: 6,368; 2018FL: 6,739; 2019FL: 6,929; 2020FL: 6,488; 2021FL: 4,975

Total: 2010FL: 3,713; 2011FL: 4,010; 2012FL: 4,403; 2013FL: 4,684; 2014FL: 5,444; 2015FL: 6,846; 2016FL: 7,547; 2017FL: 8,490; 2018FL: 9,091; 2019FL: 9,672; 2020FL: 9,672; 2021FL: 8,441

EARLY COLLEGIATE HIGH SCHOOLS

In 2011FL, the first ECHS enrolled **52 students**.

In 2021FL, about **3,500 students** attended over 20 ECHSs.

COVID-19

The Covid-19 pandemic shifted about **95% of course enrollments** in 2020FL to online instruction, compared to about **16% online instruction** in 2019FL.

Regarding the use of data, what's the biggest change you've seen in the last decade?

Bob: Clients want something tracked they do not collect or do not maintain. So, the challenge is someone taking the responsibility to collect data and/or take ownership of the data or business process and make sure it is consistent across campuses and across time.

Kira: The biggest change I've seen is that people actually want data. They want data to inform their decisions. Then they want data to show them how they are doing and how they compare to their peers.

Holly: We've moved from solely using data for reporting things like how many students are at TCC to using data for research. Now, when our constituents have a question, they also ask if there are data that might help them answer it.

What is the biggest change you see coming in terms of using data in the next decade?

Bob: Part of the challenge will be security and privacy laws and how they will affect research in the future. Think of financial aid data as an example of what was allowed but is no longer allowed.

Kira: Data Visualization, Dashboards, and Infographics. People no longer want to comb through a long report to find the one data piece that will support their project. People want instant access to data. Quick, easy, and visually appealing data.

Holly: It's twofold – ubiquity and complexity. With increasing access to data and the growing understanding of how to use it and its value, it seems like everyone will be talking about data. As such, the questions asked and methods used for gaining insights from data will get more complex.

Tell us about a project in which the data seemed to have a large impact.

Holly: Due to the pandemic, our research surrounding online courses has garnered a lot of interest. From surveying dual credit students and faculty in May 2020 about the immediate transition to remote learning and surveying students about modality preferences throughout 2020 and 2021, we're getting signs pointing towards an important shift. However, the magnitude and permeance of this shift remains uncertain, so it's something we must continue to watch from a data standpoint.

What tools/skills are essential for working with data?

Kira: Tools - SPSS or Excel. For dashboards/data visualization, Power BI will be a tool used in the near future. Skills - critical thinking, analytical mindset. Math skills are always helpful.

Bob: There are many tools, but what is essential to working with the data is understanding the data. Making sure everyone is using the same definition and/or documenting the processes of analysis or reporting. Learning to ask, "Does this make sense?"

Holly: While I could talk about tools like SPSS and R, I think it's really a mindset. It starts with curiosity – you have a question that you have the wherewithal to try to answer. Then logical-discernment kicks in. How can I break the problem down and find a solution? Lastly, it's strategic visioning. How do these results fit within a larger context and to what extent are they actionable?

THE FUTURE OF DATA

A Panel Discussion with Bob Lorick, Kira Barrington, & Holly Stovall

What are some common pitfalls when interpreting data, and how does one avoid these?

Bob: Again, I go back to everyone needs to understand the definition of a variable, and sometimes to understand why something is done a certain way or when or how a change occurred over time. One pitfall is failing to understand definitions may change over time (i.e. TSI cut scores) and going back further than three to five years does not often make sense because change is so prevalent.

Holly: One pitfall is assigning inappropriate weight to results derived from data. While data can provide evidence, evidence exists on a spectrum. In cases where the data are clean and there are few mitigating factors, it may a provide strong basis for conclusions. In other instances, the data are a weaker foundation. The research should be considered exploratory, and results should be reproduced to determine whether the same conclusions would be reached.

Kira: Some people decide what they want the data to say before the analysis is even conducted. Let the data tell the story. Let the data lead you where you need to go.

With data being more and more accessible, how have security measures changed to keep up with the progress?

Bob: Security is doing better at making sure access to secure or sensitive data is role-based, and they are beginning to classify data based on sensitivity. Multi-factor identification has certainly made products more secure, but once the data are produced, security could be undone with people sending out non-password protected personally identifiable information (PII). Embracing the concept of data minimalization will certainly help. That is, don't collect or distribute more data than is necessary to answer the question(s). Anonymizing data and aggregating data when appropriate are another security measures.

How can you tell good data from bad data?

Bob: Aren't bad data always in red? (Unfortunately, not.) You have to ask does this make sense, how does it compare to historical data, are the data just outside of what is possible? Just because you do not get an error back (SPSS, PowerBI, or THECB) does not mean the data are good. Look at it.

Holly: I'd say just asking this question is the all-important first step. The next step is to always question results that seem strange. Are the data pointing to a true change in student behavior/success, or is the anomaly a result of a policy or procedure change or even just bad data (data that aren't well maintained, bad coding, and so forth)? Trends can be important indicators of true change. So if one year looks different than the past five years, that's something we'd want to see another year or two of data on before saying too much. But if three years of data shows an increase from the prior five years, then we might be willing to make stronger statements about the likelihood of meaningful change.

About the Panel:

Bob Lorick: in IR for about 18 years (8 at UTA & 10 at TCC)
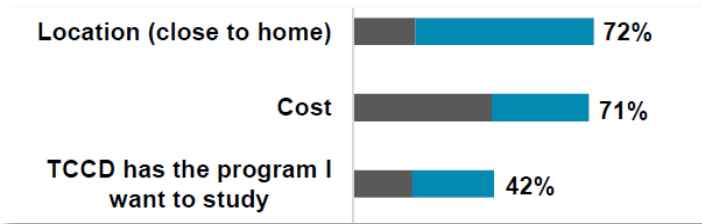
Kira Barrington: in IR at TCC for about 15 years

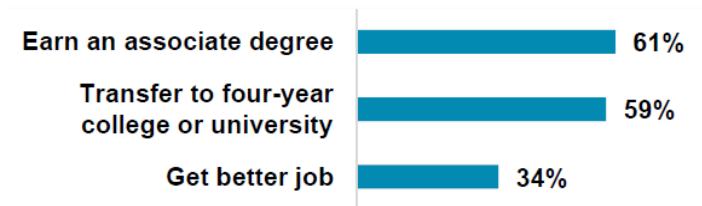*Holly Stovall: in IR at TCC for about 10 years*

SPOTLIGHT

Did you know IR produces Executive Summaries for District-wide surveys? Here are some of the interesting findings.

In May 2021, a survey was administered to gauge the intentions, goals, and needs of all TCCD students. The survey asked students "WHY DID YOU CHOOSE TCCD"?
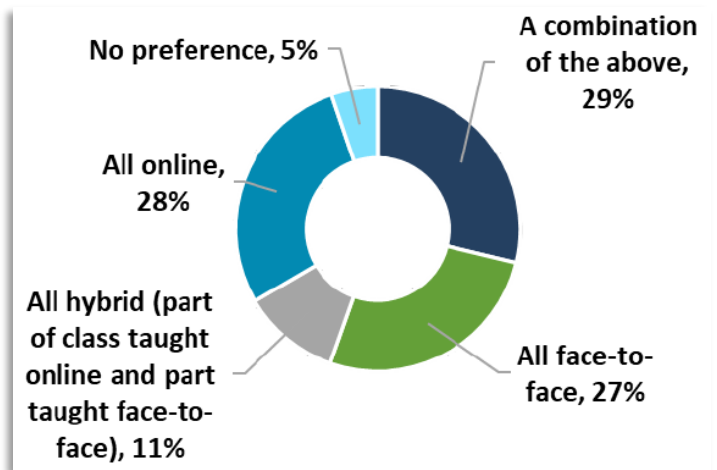
Location (close to home)	72%
Cost	71%
TCCD has the program I want to study	42%

The survey also asked students "WHAT IS YOUR GOAL WHILE AT TCCD"?

Earn an associate degree	61%
Transfer to four-year college or university	59%
Get better job	34%

In Fall 2021, a survey was administered to gain insights about students' preferences regarding the schedule. The survey asked about student preferences in course.

MODALITY

No preference, 5%
A combination of the above, 29%
All online, 28%
All hybrid (part of class taught online and part taught face-to-face), 11%
All face-to-face, 27%

Do you need help administering a survey? Go to the IT Service Desk at service.tccd.edu. Sign in using the link in the upper right corner. Then select **Services** > **Data, Reports, and Knowledge** > **Request a Survey**

For more Survey Executive Summaries, please visit:

https://www.tccd.edu/about/research/institutional-intelligence-and-research/surveys/ir-executive-summaries

CONTACT US

TCC | Tarrant County College
SUCCESS WITHIN REACH.

In the beginning, you could count the members of the IR office on one hand, and now we are a team of seven and growing. The years in between contain lessons, achievements, heartaches, and joys – all rooted in the commitment to student success through ethical and robust research. As we look into our future, we aim to maintain our focus on service to our colleagues and students. We are eager for what's to come! Please join us on the journey.

– Team IR | One IT

> "Data are just summaries of thousands of stories – tell a few of those stories to help make the data meaningful."
>
> – Chip & Dan Heath